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ABSTRACT

This curriculum guide was developed as a model for schools in Virginia to prepare local programs of studies in business education. The Business Program contains 21 courses plus a 4-year sequence of courses for office specialist and a local option for students with disabilities. This guide contains an overview of the Business Program, information on approved business program completer options, and a sample high school program of studies. Curriculum frameworks are provided for the following: (1) foundation courses (career pathways, computer applications, computer solutions, keyboarding--middle and secondary, keyboarding applications, make it your business, and principles of business and marketing); (2) occupational courses (accounting, advanced accounting, business law, business management, computer information systems [CIS], advanced CIS, desktop/multimedia presentations, finance, legal systems administration, medical systems administration, notetaking, office administration, and word processing); and (3) special programs (office specialist I-IV, and Business Individualized Program). The curriculum frameworks include course descriptions, competencies, duties, measurements of achievement, and related academic standards of learning. Competencies for an all-aspects-of-the industry component that includes planning, management, finance, technical and production skills, principles of technology, labor, community, health, safety, and environmental issues also is included. A bibliography lists 62 references. An index of courses also is included. (KC)

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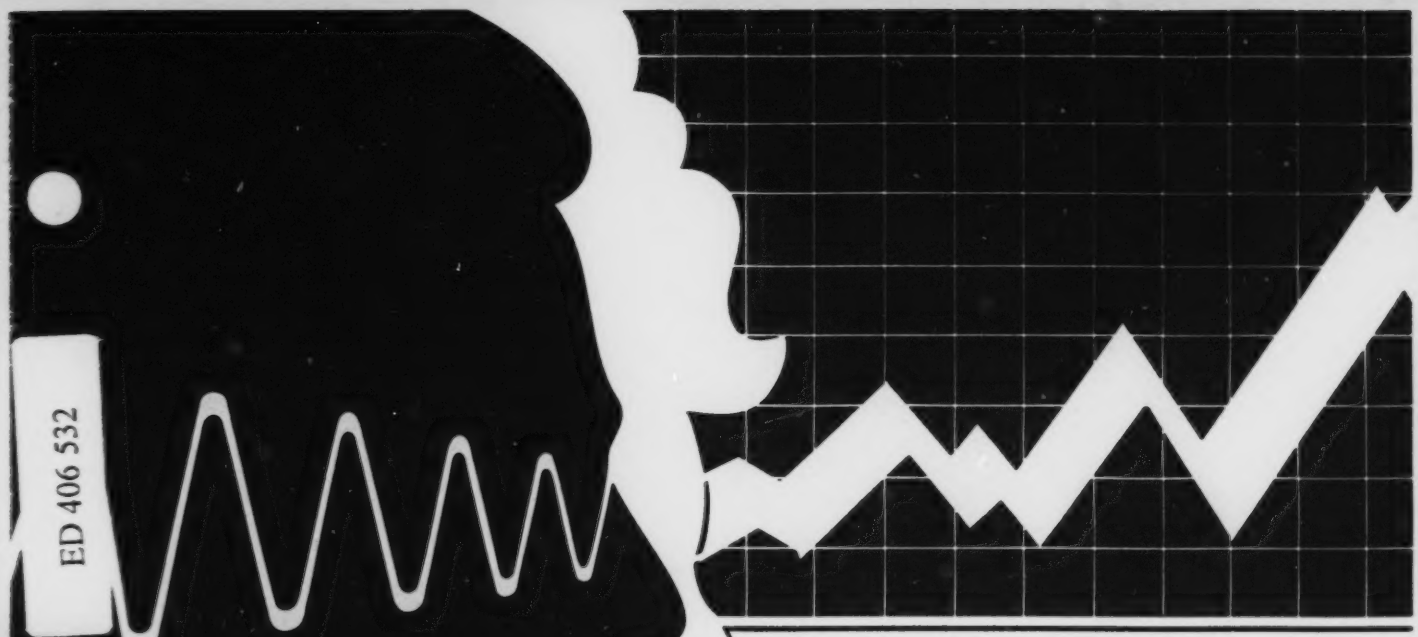

ED 406 532

A Guide to Business Course Competencies

The **BUSINESS PROGRAM** in Virginia

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Virginia Department of Education
1996

A Guide to Business Course Competencies

Produced by

the Virginia Vocational Curriculum and Resource Center

in cooperation with

the Virginia Department of Education
Office of Vocational, Adult, and Employment Training Services

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Foreword

The Business Program in Virginia is an important segment of the total educational program. Program goals include the attainment of competencies for work, further education and training, and personal use. All students are provided opportunities to complement their academic preparation through the business program.

In an effort to reduce duplication within the Business Program and among other school programs, the offerings have been streamlined to present courses that represent the greatest need for preparation for careers in the business world. The framework for business not only meets current technological advances and demands of the workplace but also provides for a curriculum framework that offers school divisions the freedom to progress in directions that meet local needs.

This publication has been developed to serve as a model for school divisions in their preparation of local programs of studies for the Business Program. Business offerings may differ from one locality to another; therefore, business teachers must assume a major role in providing information about the program to guidance counselors, school administrators, teachers, parents, representatives from the business community, and others. It is hoped that this publication will assist in this process.

The curriculum framework contained in this document represents the work of many individuals listed on the following pages. The program offerings are based on extensive research of the labor market, office trends, business enrollment analyses, surveys of Virginia business educators and admininistrators, a review of previous curriculum by business experts, and a review of curricula from other states. This work conducted by the task force members and panels of experts and the subsequent development and piloting of task lists by local school division writers, under the direction of staff members of the Virginia Vocational Curriculum and Resource Center and coordinated by Virginia Department of Education staff, is greatly appreciated.

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Task Force

Efforts to restructure Business Education commenced in the fall of 1993 with the formation of a task force to guide the initiative. Task force members coordinated local and regional meetings, gathered and examined data from a variety of sources, and met periodically to make decisions on facets of restructuring. Grateful appreciation is extended to the following task force members.

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Panel of Experts

Early in 1994, representatives of the business community served on two Panels of Experts to review the current curriculum and make recommendations for revision. The following business people gave generously of their time and expertise as members of these panels.

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Representatives of the business community again contributed their time and expertise as members of the Business Technical Committee to review all course competencies developed by the writing teams. The gracious and considered review of the following committee members is sincerely appreciated.

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During the 1995-96 school year, more than 40 business and marketing educators participated in a statewide pilot of the 1995 draft competencies and measures of achievement. Their comments and suggestions, based on actual classroom practice, have been invaluable in revising the guide to its present form.

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Virginia Vocational Curriculum and Resource Center staff member Mary Grattan and former staff member Suzanne Trevvett contributed training, writing, and editing efforts to the restructuring effort. The document was produced by the VVCRC under the direction of Margaret Watson. Writer/editors Anita Cruikshank, Cindy Hoffman, and Virginia Sowers are recognized for their ongoing contributions to the development of this document. Appreciation is also extended to Linda Ford, administrative secretary, and secretaries Earline Coleman and Dianne Swicegood for their assistance in the restructuring effort and the production of this document.

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Introduction

The Business Program offerings are designed to meet two widely recognized goals:

- attainment of business skills and knowledge, including career exploration for all
- preparation for entering business occupations and for pursuing additional education.

The Business Program

Unlike previous business curricula that have multiple occupational programs, only one program, Business, is proposed in this curriculum framework. The nature and role of office occupations have changed, and the new program reflects a streamlined design.

The program is based on a foundation of keyboarding and word processing skills along with courses in Computer Applications, Computer Solutions, Career Pathways, Make It Your Business, and Principles of Business and Marketing. Enrollment in the foundation courses allows students to explore a variety of careers. Students not only receive instruction in the fundamental skills associated with a number of business occupations but also learn essential life management skills.

Intensive preparation for business and office careers is available at the secondary level. Courses are available that will enable students to explore opportunities in business, prepare for entry and advancement on the job, develop management skills, and identify further education and training necessary within a chosen career cluster.

All students have opportunities to receive preparation for job entry and advancement in all Business courses. Students with disabilities may need modifications or accommodations to progress in these courses; these accommodations are documented on the student's individualized education program (IEP). Schools also may offer courses for targeted populations of students such as youth who are disadvantaged, students who have English as a second language, and students with disabilities. These courses for targeted populations are described in the "Special Programs" section of the guide.

The program design also provides greater flexibility. Local school divisions may adjust the curriculum framework to enhance local requirements. They may adopt alternate course titles, additional (multiple) periods, longer time frames, and additional prerequisites. Other ways to modify the framework for successful program operation include choosing sequences of course offerings and assigning grade levels that meet local needs. Where changes affect course competencies and measures of achievement, the adaptations must be made locally and validated by local advisory councils.

Cooperative efforts with the Marketing Program have resulted in the development of two foundation courses. Business and Marketing educators worked together to produce Make It Your Business and Principles of Business and Marketing. These courses carry endorsements for teachers certified in either Business or Marketing.

Cooperative Office Education

Cooperative Office Education (COE) is a teaching method available in each occupational course. It includes supervised, on-the-job instruction. Students attend classes part of the day and work in an approved business/office position part of the day. The teacher-coordinator develops with the on-the-job training sponsor and the student an individualized training plan identifying learning experiences according to the student's occupational objective. The on-the-job instruction is an extension of the classroom instruction coordinated by the classroom teacher into a single learning package.

All occupational courses listed for Business are eligible for the cooperative education method of instruction. Local school divisions should identify which of the occupational courses they designate as Cooperative Office Education courses.

Student Organization: Future Business Leaders of America

The Future Business Leaders of America (FBLA) is the vocational student organization for all individuals enrolled in business courses. The activities are specially related to the development of personal employability and leadership skills. Through participation in the organization, business students learn to engage in individual and group business enterprises, to hold office and direct the affairs of a group, to work with representatives of other student organizations, and to compete honorably with their colleagues.

Employment Opportunities

Entry (After high school graduation)

Account Clerk
Account Collector
Administrative Assistant
Assistant Analyst
Audit Assistant
Benefits Analyst
Credit Representative
Customer Service Representative
Data Entry Operator
Desktop Publisher
Disk Librarian
Employment Interviewer
Financial Service Representative
Information Assistant
Loan Interviewer
Medical Records Technician
New Accounts Representative
Office Technician
Payables/Receivables Analyst
Payroll Clerk
Personnel Assistant
Production Technician
Records Assistant
Records Processor
Secretary
Service Representative
Service Technician
Technical Support Analyst
Word Processor

Technical (Postsecondary education)

Account Specialist
Accounting Technician
Administrative Service Supervisor
Applications Specialist
Applications Systems Analyst
Appraiser
Associate Accounting
Bookkeeper

Technical (Postsecondary education) - Continued

Budget Analyst
Business Representative
Claims Representative
Claims Agent
Computer Graphics Artist
Contract Specialist
Cost Estimator
Credit Analyst
Database Administrator
Employment Interviewer
Fiscal Analyst
Human Resources Manager
Information Systems Specialist
Junior Accountant
Labor Relations Specialist
Loan Specialist
Local Area Network Representative
Management Information Systems (MIS) Specialist
Office Automation Specialist
Office Manager
Paralegal
Personnel Analyst
Personnel Technician
Project Director
Purchasing Agent
Records Management Analyst
Securities Administrator
Systems Programmer
Tax Preparer
Technical Writer
Telecommunications Specialist

Professional (College/university/postgraduate education)

Accountant
Accounts Executive
Applications Programmer
Appraiser
Associate Systems Engineer
Auditor
Bank Manager
Benefits Manager
Business Manager
Business Professor
Chief Financial Officer
Consulting Systems Engineer
Contract Administrator
Controller
Computer Operations Manager
Computer Programmer
Corporate Trainer
Credit Manager
Director of Administrative Services
Director of Finance
Education Specialist
Escrow Officer
Facilities Manager
Information Systems Administrator
Information Systems Analyst
Insurance Manager
Labor Relations Negotiator
Management Consultant
Operations Research Analyst
Personnel Manager
Production Manager
Program Director
Risk Manager
Securities Analyst
Stockbroker
Software Programmer
Telecommunications Manager
Training Manager
Trust Officer

Related Postsecondary Programs

Accounting
Business Management and Administration
Computer Information Systems
Computer Science
Economics
Information Systems
Legal Administration
Management Information Systems
Medical Assisting
Office Administration
Office Systems Technology

Overview of the Business Program

Local school divisions may decide to adjust the curriculum framework to enhance local requirements. They may adopt alternate course titles, additional (multiple) periods, longer time frames, and additional prerequisites. Other ways to modify the framework for successful program operation include choosing sequences of course offerings and assigning grade levels that meet local needs. Where changes affect course competencies and measures of achievement, the adaptations must be made locally and validated by local advisory councils.

Courses	Course Code	CIP Code	Suggested Grade Level	No. Weeks	Suggested Maximum Class Size	Class Periods	Credits
Foundation: Elementary Level							
Keyboarding Instructional Units	N/A	N/A	K-5	20 Hrs. Minimum	N/A	Daily, Length to be Determined Locally	
Foundation: Middle School and Junior and Senior High School							
Keyboarding (Middle)	6150	52.0408	6-8	6,9,12,18	25	1	---
Keyboarding (Secondary)	6151	52.0408	9-12	18	25	1	1/2
Keyboarding Applications	6152	52.0408	9-12	18, 36	25	1	1/2, 1
Career Pathways		52.9999	6-12	Local Deter.	25	1	1/2, 1
Phase I	9070						
Phase II	9071						
Phase III	9072						
Computer Applications	6611	52.1299	7-10	18, 36	25	1	1/2, 1
Computer Solutions	6610	52.1299	7-8	6,9,12,18,36	25	1	---
Make It Your Business*	6110	52.0701	6-9	6,9,12,18	25	1	---
Principles of Business and Marketing*	6115	52.0101	9-10	18, 36	25	1	1/2, 1
*Note: These courses are developed jointly by business and marketing educators and carry both business and marketing endorsements.							
Cooperative Office Education (COE): All occupational courses and special program courses listed for the Business Program are eligible for the cooperative education method of instruction. Local school divisions should identify which of the occupational courses they designate as COE.							
Occupational: Comprehensive High Schools, Technical Centers, Alternative Schools							
Note: All occupational courses listed are available to all students to complement their academic or other vocational preparational program.							
Accounting	6320	52.0302	10-12	36	25	1	1
Advanced Accounting	6321	52.0302	11-12	36	25	1	1
Business Law	6131	52.0202	11-12	18, 36	25	1	1/2, 1
Business Management	6135	52.0201	11-12	18, 36	25	1	1/2, 1
Computer Information Systems	6612	52.1201	10-12	18, 36	20	1	1/2, 1
Adv. Computer Information Systems	6613	52.1201	11-12	36	20	1 or 2	1 or 2
Desktop/Multimedia Presentations	6630	52.0407	11-12	18, 36	20	1	1/2, 1
Finance	6120	52.0899	11-12	18, 36	25	1	1/2, 1
Legal Systems Administration	6735	52.0403	11-12	18, 36	20	1 or 2	1/2 to 2
Medical Systems Administration	6730	52.0404	11-12	18, 36	20	1 or 2	1/2 to 2
Notetaking	6241	52.0401	9-12	18, 36	25	1	1/2, 1
Office Administration	6621	52.0401	10-12	18, 36	25	1	1/2, 1
Word Processing	6625	52.0407	9-12	18, 36	20	1	1/2, 1
Special Programs				**Required Maximum Class Size**			
Office Specialist I	6740	52.0408	9-12	36	15	1 or 2	1 or 2
Office Specialist II	6741	52.0408	10-12	36	15	1 or 2	1 or 2
Office Specialist III	6742	52.0408	11-12	36	15	1 or 2	1 or 2
Office Specialist IV (Targeted Populations)	6743	52.0408	12	36	15	1 or 2	1 or 2
Business Individualized Program	6745	52.0408	9-12	36	10	1 or 2	1 or 2

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Additional Course Codes

Additional course codes that can be used in reporting class enrollments include the following:

- Business Artificial Intelligence–Expert Systems (6655)
- Business and Computer Careers (6109)–Foundation course
- Business Economics (6144)
- Business English (6147)
- Business Mathematics (6141)
- Data Processing I and II (6640, 6650)
- Employment Seminar (6125)
- International Business (6148)
- Office Assistant–SIP (6750)
- Office Simulation (6440)
- Recordkeeping (6330)

Approved Business Program Completer Options

Minimum completer requirements for a regular business program are as follows:

- Keyboarding prerequisite: Students may successfully complete an approved keyboarding course or, if they can demonstrate touch keyboarding skills, may test out to the teacher's approval (competencies must be documented).

- Any two occupational courses (or semester equivalents that equal two 36-week courses) must be taken.
  Note: Block programs offered at technical centers and meeting the equivalent of two 36-week courses constitute a completion when combined with the requirements listed above.

Occupational courses (See Overview, page 5, for suggested grade levels and course length):

Accounting
Business Law
Computer Information Systems
Desktop/Multimedia Presentations
Legal Systems Administration
Notetaking
Word Processing
Advanced Accounting
Business Management
Advanced Computer Information Systems
Finance
Medical Systems Administration
Office Administration

Examples of Program Completers

Full year courses:
Keyboarding prerequisite
Computer Information Systems, 36 weeks
Advanced Computer Information Systems, 36 weeks

Semester courses:
Keyboarding prerequisite
Office Administration, 18 weeks
Word Processing, 18 weeks
Desktop/Multimedia Presentations, 18 weeks
Notetaking, 18 weeks

Combined year and semester courses:
Keyboarding prerequisite
Accounting, 36 weeks
Business Management, 18 weeks
Business Law, 18 weeks

Special programs. Special programs do not require a prerequisite. Students are considered program completers when they successfully fulfill the requirements of the highest level offered in the school division.

Note: School divisions should guide students in planning for meaningful, sequential program completions.

SAMPLE HIGH SCHOOL PROGRAM OF STUDIES

Business High School Program*				
Period**	**9th Grade**	**10th Grade**	**11th Grade**	**12th Grade**
1	English	English	English	English
2	Algebra I	Geometry	Algebra II	Elective
3	Earth Science	Biology I	Chemistry I	Elective
4	World Geography	World History	Virginia and U. S. History	Virginia and U. S. Government
5	Health and Physical Education	Health and Physical Education	Elective or Foreign Language	Elective or Foreign Language
6	Principles of Business and Marketing	Keyboarding Applications	Word Processing	Office Administration

Business High School Program Advanced Studies				
Period**	**9th Grade**	**10th Grade**	**11th Grade**	**12th Grade**
1	English	English	English	English
2	Algebra I	Geometry	Algebra II	Calculus
3	Earth Science	Biology I	Chemistry I	Physics
4	World Geography	Health and Physical Education	Virginia and U.S. History	Virginia and U.S. Government
5	Health and Physical Education	Foreign Language	Foreign Language	Foreign Language
6	Keyboarding Applications	World History	Accounting	Computer Information Systems

* Electives may be filled in by other business courses that complement the business concentration or by courses that constitute a vocational program mix or by the following suggested academic complementary courses: Economics, International Relations, Journalism, Language and Composition, Probability and Statistics, and Speech.

** Seven-period and block scheduling would allow additional scheduling opportunities.

Curriculum Framework

The Business Program contains 21 courses plus a four-year sequence of courses for Office Specialist and a local option for students with disabilities. The framework presented on the following pages provides a description, a list of competencies, a list of measures of achievement, and identified Standards of Learning (SOLs) that are reinforced in instruction for each course in the program. These components were field- and pilot-tested during the 1995-96 school year and were revised based on the results of the tests.

During the development of course competencies and measures of achievement, certain concepts were identified as underlying tenets of all courses. These concepts include the following.

- Business terminology and vocabulary growth are integral enablers to the mastery of each competency. Learning activities include vocabulary and specialized terminology instruction; thus, specific competencies devoted to the definition or use of terminology are not listed.

- FBLA co-curricular activities contribute to student growth and development. Although two competencies in each course specifically reflect student organization participation, all competencies should be reinforced through FBLA activities. Additional FBLA competencies may be added as needed in each course.

- Course orientation activities are classroom specific; they reflect the individual teacher's style and local school requirements. Consequently, the competency lists do not include tasks addressing course orientation. These competencies may be added at the local level.

- Development of employability skills should begin in the foundation courses and be enhanced, rather than repeated, in the occupational courses. A verb hierarchy is used in these competencies to illustrate development, revision, and refinement as students gain new skills and achieve success.

- Certain courses have designated prerequisites. Prerequisite competencies are not repeated in these courses; however, inclusion of these skills may be shown with higher level verbs, illustrating the need to enhance and refine these skills.

- Core academic competencies are no longer referenced in separate appendices. Each competency list contains a component titled "Related Academic Standards of Learning." In this section, specific Standards of Learning (as published in *Standards of Learning for Virginia Public Schools*, June 1995) related to the competencies and measures of achievement are cited. The list of SOLs is not inclusive and should be amended to reflect instruction at the local level. The SOLs have been correlated only for the grade levels shown in the course description. Previously attained standards have not been repeated.

- Competencies related to "All Aspects of the Industry" are identified in a separate list that follows the curriculum framework. These competencies should be reviewed and incorporated in locally identified sequences for program completions.

Foundation Courses

Career Pathways

Computer Applications

Computer Solutions

Keyboarding (Middle)

Keyboarding (Secondary)

Keyboarding Applications

Make It Your Business

Principles of Business and Marketing

Career Pathways
9070 (Phase I), 9071 (Phase II), 9072 (Phase III)
CIP Code: 52.9999
Grade Levels: 6, 7, 8, 9, 10, 11, 12 (Duration to be determined locally)
Prerequisite: None

Description:	In this three-phase competency-based program of career exploration, all students study how to find the right career (Phase I) and investigate through job-site activities the career clusters of business and management, technical and manufacturing, health and human services, and communication and media occupations (Phase II). The program culminates in an examination of and search for practical solutions to perennial problems of business (Phase III). Localities identify clusters and design the program based on the needs of the community. The three phases usually require a two-year time frame.

Curriculum is being developed for all phases. Information on Phase I and Phase II curriculum is available and may be obtained from the Virginia Vocational Curriculum and Resource Center, 2200 Mountain Road, Glen Allen, Virginia 23060, phone 804-261-5075, fax 804-261-5079.

Computer Applications 6611
CIP Code: 52.1299
Grade Levels 7, 8, 9, 10 (18, 36 weeks)
Prerequisite: Keyboarding recommended

Description:	Students develop or review correct keyboarding techniques and gain a basic knowledge of word processing, spreadsheet, database, and graphics applications. Students demonstrate an understanding of computer concepts through application of knowledge. Students learn to use software packages and to operate many types of equipment such as word processors, printers, copiers, and computers.
Note:	This task list contains competencies for a 36-week course. The list should be adjusted for courses of shorter duration.

Competencies	Measures of Achievement
DUTY AREA 1. Mastering Keyboarding Skills	
Select competencies from Keyboarding 6150 for middle school students; for secondary students, select competencies from Keyboarding 6151.	
DUTY AREA 2. Mastering Basic Computer Operations	
2.1 Explain the functions of computer system components.	2.1 Instructor-prepared test, rated average or above
2.2 Load, access, and exit software.	2.2 Student demonstration, rated acceptable based on instructor-prepared checklist
2.3 Determine available memory and disk space.	2.3 Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
2.4 Create backup and restore from backup.	2.4 Student demonstration; backup created according to system guidelines, files restored completely
2.5 Create and manipulate directories.	2.5 Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
2.6 Operate system functions (e.g., format, copy, remove, delete).	2.6 Student demonstration, rated acceptable based on instructor-prepared checklist
2.7 Identify methods of preventing importation of computer viruses.	2.7 Instructor-prepared test, rated average or above

Competencies		Measures of Achievement	
DUTY AREA 3. Using Word Processing Applications			
3.1	Identify various word processing applications.	3.1	Student-prepared list, rated average or above
3.2	Identify alternative ways to input documents (e.g., optical character recognition, voice-to-terminal input, computer input from microfilm).	3.2	Instructor-prepared test, rated average or above
3.3	Key and format letters, memoranda, reports, and tables.	3.3	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
3.4	Edit documents using techniques such as delete, insert, typeover, block, move, and copy.	3.4	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
3.5	Enhance documents by using different fonts and features such as bold, italics, and bullets.	3.5	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
3.6	Enhance layout of documents by using features such as leader tabs, shading, lines, and boxes.	3.6	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
3.7	Use features such as headers, footers, justification, and pagination.	3.7	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
3.8	Set printer specifications (e.g., choose printer, online, top-of-form, font).	3.8	Student-produced printed copy, rated acceptable based on instructor's guidelines
DUTY AREA 4. Implementing Database Management Techniques			
4.1	Identify database applications.	4.1	Student-prepared list, rated average or above
4.2	Create a database.	4.2	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
4.3	Enter, move, and edit alpha/numeric data.	4.3	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
4.4	Process material using database features such as sort and merge.	4.4	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
4.5	Access data through search procedures.	4.5	Student-produced list of items found, rated acceptable based on instructor-prepared checklist
4.6	Design and print a report.	4.6	Student-produced printed copy, rated acceptable based on instructor's guidelines
4.7	Integrate word processing/spreadsheet applications.	4.7	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
DUTY AREA 5. Implementing Spreadsheet Applications			
5.1	Identify the uses of a spreadsheet program.	5.1	Student-prepared list, rated average or above
5.2	Enter data and formulas.	5.2	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.3	Edit data within the spreadsheet (retrieve, update, move, and save).	5.3	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.4	Forecast economic developments.	5.4	Student-completed worksheet, calculations completed with 100% accuracy
5.5	Integrate word processing and database information.	5.5	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.6	Design and print a report.	5.6	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
DUTY AREA 6. Incorporating Graphic Features			
6.1	Identify graphic features incorporated in a variety of media.	6.1	Student-completed worksheet, rated average or above
6.2	Enhance word processing documents by incorporating graphic elements.	6.2	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
6.3	Enhance spreadsheet documents by incorporating graphic elements.	6.3	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
6.4	Create visual communications involving art work (e.g., freehand drawing applications, clip art).	6.4	Oral presentation, student-produced screen, or printed copy, rated acceptable based on instructor's guidelines
6.5	Create visual communications involving text and graphic data (e.g., brochures, pamphlets, flyers, newsletters).	6.5	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
DUTY AREA 7. Identifying Ethical Issues Related to Computers			
7.1	Identify security issues related to computer hardware, software, and data.	7.1	Small group presentation, rated acceptable based on criteria specified in instructor's guidelines
7.2	Explain concepts of integrity and confidentiality related to data files.	7.2	Small group presentation, rated acceptable based on criteria specified in instructor's guidelines
7.3	Explain concepts related to copyright, public domain, copy protection, and licensing agreements.	7.3	Small group presentation, rated acceptable based on criteria specified in instructor's guidelines.
DUTY AREA 8. Maintaining Equipment			
8.1	Maintain printer.	8.1	Student demonstration, rated acceptable based on manufacturer's guidelines
8.2	Clean hardware and peripherals.	8.2	Student demonstration, rated acceptable based on manufacturer's guidelines
8.3	Run CHKDSK.	8.3	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
8.4	Identify safety precautions associated with computer use (e.g., surge protectors, anti-static mats and pads, power plugs).	8.4	Student-completed worksheet, rated acceptable based on instructor's guidelines
8.5	Identify common hazards associated with the use of diskettes.	8.5	Instructor-prepared quiz, rated average or above
DUTY AREA 9. Developing Employability Skills			
9.1	Identify the purposes and goals of the student organization.	9.1	Written or oral identification, rated acceptable according to instructor's guidelines

Competencies		Measures of Achievement	
9.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	9.2	Student demonstration, all items rated acceptable based on instructor's guidelines
9.3	Research career opportunities.	9.3	Written or oral report, rated acceptable based on instructor's guidelines
9.4	Prepare a resume.	9.4	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
9.5	Complete a job application form.	9.5	Student-completed application form, rated acceptable based on industry standards
9.6	Demonstrate interviewing techniques.	9.6	Student role play, rated acceptable based on instructor-prepared rating form
9.7	Compose an interview follow-up letter.	9.7	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
9.8	Create a portfolio containing representative examples of work developed.	9.8	Student-produced portfolio containing components designated by the instructor, all items rated acceptable based on instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning (SOLs). Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 7

7.1 The student will give and seek information in conversations and in group discussions.
- Use oral vocabulary and style appropriate for listeners.
- Communicate ideas and information orally in an organized and succinct manner.
- Ask probing questions to seek elaboration and clarification of ideas.
- Make supportive statements to communicate agreement or acceptance of others' ideas.

7.2 The student will identify the relationship betwen a speaker's verbal and nonverbal messages.
- Use verbal communication skills, such as word choice, pitch, feeling, tone, and voice.
- Use nonverbal communication skills, such as eye contact, posture, and gestures.

7.4 The student will use analogies, idioms, similes, and metaphors to extend understanding of word meaning.

7.6 The student will read and understand information from varied sources.
- Use knowledge of text structures to aid comprehension.
- Make, confirm, or revise predictions as needed.
- Distinguish fact from opinion in newspapers, magazines, and other print media.
- Summarize what is read.
- Organize and synthesize information for use in written and oral presentations.

7.8 The student will develop narrative, expository, persuasive, and technical writings.
- Apply knowledge of prewriting strategies.
- Elaborate the central idea in an organized manner.
- Choose vocabulary and information that will cause a reader to perceive images and tone.
- Use clauses and phrases to embed context into sentences.
- Revise writing for clarity.
- Edit final copies to ensure correct use of homonyms, pronoun-antecedent agreement, subject-verb agreement, and verb tense consistency.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

7.9 The student will use a word processor to plan, draft, revise, and publish some writings.
- Use available word processing tools to check spelling, style, and grammar.

7.10 The student will apply knowledge of resources in preparing written and oral presentation.
- Use print and electronic sources to locate books and articles.
- Use a thesaurus to select more exact descriptive, specific, or effective vocabulary for writing.
- Use graphic organizers to organize information.
- Credit secondary reference sources.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

Grade 8

8.1 The student will use interviewing techniques to gain information.
- Prepare and ask relevant questions for the interview.
- Make notes of responses.
- Compile and report responses.
- Evaluate the effectiveness of the interview.

8.2 The student will apply knowledge of word origins, derivations, and idioms and will use analogies, metaphors, and similes to extend vocabulary development.

8.4 The student will comprehend what is read from a variety of sources.
- Draw on background knowledge and knowledge of text structure to understand selections.
- Analyze details for relevance and accuracy.
- Read and follow instructions to assemble a model or simple structure.
- Evaluate and synthesize information to apply in written and oral presentations.

8.5 The student will write in a variety of forms, including narrative, expository and persuasive writings.
- Use prewriting strategies to generate and organize ideas.
- Focus on elaboration and organization.
- Select specific vocabulary and information.
- Use standard sentence formation, eliminating comma splices and other nonstandard forms of sentences that distract readers.
- Revise writing for word choice, appropriate organization, consistent point of view, and transitions among paragraphs.
- Edit final copies to ensure correct use of pronoun case, verb tense inflections, and adjective and adverb comparisons.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

Grade 9

9.2 The student will make planned oral presentations.
- Include definitions to increase clarity.
- Use relevant details to support main ideas.
- Illustrate main ideas through anecdotes and examples.
- Cite information sources.
- Make impromptu responses to questions about presentation.

9.4 The student will read and analyze a variety of print materials.
- Identify a hypothesis to be confirmed, disproved, or modified.
- Evaluate clarity and accuracy of information.
- Synthesize information from sources and apply it in written and oral presentations.
- Identify questions not answered by a selected text.
- Extend general and specialized vocabulary through reading and writing.
- Read and follow instructions to use computer software, assemble or construct models or equipment, or complete a project.

9.6 The student will develop narrative, literary, expository, and technical writings to inform, explain, analyze, or entertain.
- Plan and organize writing.
- Communicate clearly the purpose of the writing.
- Write clear, varied sentences.
- Use specific vocabulary and information.
- Arrange paragraphs into a logical progression.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

9.7 The student will credit the sources of both quoted and paraphrased ideas.
- Define the meaning and consequences of plagiarism.
- Distinguish one's own ideas from information created or discovered by others.
- Use a style sheet method for citing secondary sources, such as MLA or APA.

9.8 The student will use electronic databases to access information.
- Identify key terms.
- Narrow the focus of a search.
- Scan and select resources.

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.2 The student will critique oral reports of small-group learning activities.
- Evaluate one's own role in preparation and delivery of oral reports.
- Evaluate effectiveness of group process in preparation and delivery of oral reports.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.
- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.8 The student will critique professional and peer writing.
- Analyze the writing of others.
- Describe how writing accomplishes its intended purpose.
- Suggest how writing might be improved.
- Apply knowledge of critical analysis to writing.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Mathematics

Grade 7

7.1 The student will compare, order, and determine equivalent relationships between fractions, decimals, and percents, including scientific notation.

7.5 The student will solve consumer application problems involving tips, discounts, sales tax, and simple interest, using whole numbers, fractions, decimals, and percents.

7.6 The student will
- solve practical problems involving basic operations with integers by formulating rules for operating with integers and using a number line to compute; and
- explain the need for integers, using examples from real-life situations.

7.16 The student will make a sample space for selected experiments and represent it in the form of a list, chart, picture, or tree diagram.

7.20 The student will display data, using frequency distributions, line plots, stem-and-leaf plots, box-and-whisker plots, and scattergrams.

7.21 The student will make inferences and predictions based on the analysis of a set of data that the student(s) collect.

7.23 The student will write verbal expressions/sentences as algebraic expressions/equations.

7.24 The student will use the following algebraic terms appropriately in written and/or oral expressions: equation, inequality, variable, expression, term, coefficient, domain, and range.

7.25 The student will
- Solve two-step linear equations and inequalities in one variable, using strategies involving inverse operations and integers; and
- solve practical problems requiring the solution of a two-step linear equation.

Grade 8

8.1 The student will use proportions to solve scale-model problems with fractions and decimals.

8.4 The student will solve practical problems involving whole numbers, integers, and rational numbers, including percents. Problems will be of varying complexities, involving real-life data.

8.13 The student will use information displayed in line, bar, circle, and picture graphs and histograms to make comparisons, predictions, and inferences.

8.14 The student will use a matrix to organize and describe data.

8.18 The student will describe and represent relations using tables, graphs, and rules.

8.19 The student will create and solve problems using proportions, formulas, and functions.

Algebra I

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.8 The student will design and implement computer graphics, which will include topics appropriate for the available programming environment as well as student background. Students will use graphics as an end in itself, as an enhancement to other output, and as a vehicle for reinforcing programming techniques.

COM.11 The student will describe the way the computer stores, accesses, and processes variables, including the following topics: the use of variables versus constants, variables addresses, pointers, parameter passing, scope of variables, and local versus global variables. This will also include use of terminology, including memory, CPU, RAM, ROM, baud, byte, bits, floppy disc, and hard drive.

COM.14 The student will implement conditional statements that include if/then, if/then/else, case statements, and Boolean logic.

COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure.

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

Computer /Technology

C/T8.1 The student will communicate through application software.

- Compose and edit a multipage document at the keyboard, using word processing skills and writing process steps.
- Communicate with spreadsheets by entering data and setting up formulas, analyzing data, and creating graphs or charts to visually represent data.
- Communicate with databases by defining fields and entering data, sorting, and producing reports in various forms.
- Use advanced publishing software, graphics programs, and scanners to produce page layouts.
- Integrate databases, graphics, and spreadsheets into word-processed documents.

C/T8.2 The student will communicate through networks and telecommunication.

- Use local and worldwide network communication systems.
- Develop hypermedia "home page" documents that can be accessed by worldwide networks.

C/T8.3 The student will have a basic understanding of computer processing, storing, retrieval and transmission technologies and a practical appreciation of the relevant advantages and disadvantages of various processing, storage, retrieval, and transmission technologies.

C/T8.4 The student will process, store, retrieve, and transmit electronic information.

- Use search strategies to retrieve electronic information.
- Use electronic encyclopedias, almanacs, indexes, and catalogs to retrieve and select relevant information.
- Use laser discs with a computer in an interactive mode.
- Use local and wide-area networks and modem-delivered services to access and retrieve information from electronic databases.
- Use databases to perform research.

History and Social Science

Grade 7

7.9 The student will demonstrate an understanding of the rights and responsibilities of citizens in America by

- describing ways individuals participate in the political process, such as registering and voting, communicating with government officials, participating in political campaigns, serving on juries and in voluntary appointed positions;
- describing and evaluating common forms of credit, savings, investments, purchases, contractual agreements, warranties, and guarantees; and
- analyzing career opportunities, in terms of individual abilities, skills, and education, and the changing supply and demand for those skills in the economy.

Grade 9

9.10 The student will analyze major historical events of the 20th century, in terms of

- causes and effects of World War I and World War II;
- the Russian Revolution;
- the rise, aggression, and human costs of totalitarian regimes in the Soviet Union, Germany, Italy, and Japan;
- the political, social, and economic impact of worldwide depresion in the 1930's;
- the Nazi Holocaust and other examples of genocide;
- new technologies, including atomic power, and their influence on the patterns of conflict;
- economic and military power shifts since 1945, including the rise of Germany and Japan as economic powers;
- revolutionary movements in Asia and their leaders, including Mao Zedong and Ho Chi Minh;
- how African and Asian countries achieved independence from European colonial rule, including India under Gandhi and Kenya under Kenyatta and how they have fared under self-rule;
- regional and political conflicts including Korea and Vietnam; and
- the beginning and end of the Cold War and the collapse of the Soviet Union.

Computer Solutions 6610
CIP Code: 52.1299
Grade Levels 7, 8 (6/9/12/18/36 weeks)
Prerequisite: None

Description:	Students use the computer as a problem-solving tool to complete a variety of projects. Students participate in team-building activities that include both academic and business competencies. Basic touch keyboarding instruction is provided early in the course.
Note:	This task list contains competencies for a 36-week course. The list should be adjusted for courses of shorter duration.

Competencies	Measures of Achievement
DUTY AREA 1. Demonstrating Keyboarding Skills	
Select competencies from Keyboarding 6150.	
DUTY AREA 2. Solving Problems Independently and in Groups	
2.1 Build team skills.	2.1 Student demonstration, rated acceptable based on instructor's guidelines
2.2 Identify the problem.	2.2 Written or oral summary, rated acceptable based on instructor's guidelines
2.3 Identify potential solutions.	2.3 Group-produced list/product, rated acceptable based on instructor's guidelines
2.4 Examine alternative solutions.	2.4 Written or oral presentation identifying advantages and disadvantages of possible solutions, rated acceptable based on instructor's guidelines
2.5 Select a solution.	2.5 Student-produced activity/product, rated acceptable based on instructor's rating form
2.6 Evaluate the outcome of the solution.	2.6 Student-produced evaluation, rated acceptable based on instructor's rating form
DUTY AREA 3. Solving Problems Using Word Processing Software*	
3.1 Analyze a problem, determining the word processing skills needed for solution.	3.1 Written analysis, rated average or above based on instructor's guidelines
3.2 Apply word processing skills to solve a problem.	3.2 Student-created document, rated average or above based on instructor's guidelines
* *Select competencies as needed from Computer Applications, Duty Area 3.*	

Competencies	Measures of Achievement
DUTY AREA 4. Solving Problems Using Database Software*	
4.1 Identify ways database software can be used to solve problems.	4.1 Written or oral group activity, rated acceptable based on instructor's guidelines
4.2 Analyze a problem determining the database skills needed for solution.	4.2 Written or oral analysis, rated average or above based on instructor's guidelines
4.3 Apply database skills to solve a problem.	4.3 Student-created document, rated average or above based on instructor's guidelines
**Select competencies as needed from Computer Applications, Duty Area 4.*	
DUTY AREA 5. Solving Problems Using Spreadsheet Software*	
5.1 Identify ways spreadsheet software can be used to solve problems.	5.1 Written or oral group activity, rated acceptable based on instructor's guidelines
5.2 Analyze a problem determining the spreadsheet skills needed for solution.	5.2 Written or oral analysis, rated average or above based on instructor's guidelines
5.3 Apply spreadsheet skills to solve a problem.	5.3 Student-created document, rated average or above based on instructor's guidelines
** Select competencies as needed from Computer Applications, Duty Area 5.*	
DUTY AREA 6. Solving Problems Using Visual and Auditory Communications*	
6.1 Identify ways visual communication software can be used to solve problems or enhance solutions involving numeric data, free-hand drawing and clip art, text and graphic data, animation, sound effects, and other features.	6.1 Written or oral group activity, rated acceptable based on instructor's guidelines
6.2 Analyze a problem determining the visual and auditory communication skills needed for a solution.	6.2 Written or oral analysis, rated average or above based on instructor's guidelines
6.3 Apply visual and auditory communication skills to solve a problem or enhance a solution.	6.3 Student-created document, rated average or above based on instructor's guidelines
** Select competencies as needed from Computer Applications, Duty Area 6*	
DUTY AREA 7. Exploring Telecommunications	
7.1 Identify the basic concepts of electronic communications.	7.1 Student demonstration, rated acceptable based on instructor's guidelines
7.2 Use communications protocol and use modem to send fax and otherwise access remote terminals.	7.2 Student-prepared checklist, rated acceptable based on instructor's guidelines

Competencies	Measures of Achievement
7.3 Complete an online search for data by accessing a regional, state, or national database (e.g., VA.PEN, Internet).	7.3 Screen or print copy, rated acceptable based on instructor's guidelines
7.4 Identify ways telecommunications can be used to solve problems.	7.4 Written or oral group activity, rated acceptable based on instructor's guidelines
7.5 Analyze a problem determining the telecommunication skills needed for a solution	7.5 Written or oral analysis, rated average or above based on instructor's guidelines
7.6 Apply telecommunication skills to solve a problem or enhance a solution.	7.6 Individual or group activity, rated average or above based on instructor's guidelines
DUTY AREA 8. Participating in Co-curricular Activities	
8.1 Identify the purposes and goals of the student organization.	8.1 Written or oral identification, rated acceptable according to instructor's guidelines
8.2 Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	8.2 Student demonstration, all items rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 7

7.1 The student will give and seek information in conversations and in group discussions.
- Use oral vocabulary and style appropriate for listeners.
- Communicate ideas and information orally in an organized and succinct manner.
- Ask probing questions to seek elaboration and clarification of ideas.
- Make supportive statements to communicate agreement or acceptance of others' ideas.

7.2 The student will identify the relationship between a speaker's verbal and nonverbal messages.
- Use verbal communication skills, such as word choice, pitch, feeling, tone, and voice.
- Use nonverbal communication skills, such as eye contact, posture, and gestures.
- Compare/contrast a speaker's verbal and nonverbal messages.

7.3 The student will identify persuasive messages in nonprint media, including television, radio, and films.
- Identify persuasive technique used.
- Distinguish between fact and opinion.

7.4 The student will use analogies, idioms, similes, and metaphors to extend understanding of word meanings.

7.6 The student will read and understand information from varied sources.
- Use knowledge of text structures to aid comprehension.
- Make, confirm, or revise predictions as needed.
- Distinguish fact from opinion in newspapers, magazines, and other print media.
- Summarize what is read.
- Organize and synthesize information for use in written and oral presentations.

7.8 The student will develop narrative, expository, persuasive, and technical writings.
- Apply knowledge of prewriting strategies.
- Elaborate the central idea in an organized manner.
- Choose vocabulary and information that will cause a reader to perceive images and tone.
- Use clauses and phrases to embed context into sentences.
- Revise writing for clarity.
- Edit final copies to ensure correct use of homonyms, pronoun-antecedent agreement, subject-verb agreement, and verb tense consistency.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

7.9 The student will use a word processor to plan, draft, revise, and publish some writings.
- Use available word processing tools to check spelling, style, and grammar.

7.10 The student will apply knowledge of resources in preparing written and oral presentations.
- Use print and electronic sources to locate books and articles.
- Use a thesaurus to select more exact descriptive, specific, or effective vocabulary for writing.
- Use graphic organizers to organize information.
- Credit secondary reference sources.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

Grade 8

8.1 The student will use interviewing techniques to gain information.
- Prepare and ask relevant questions for the interview.
- Make notes of responses.
- Compile and report responses.
- Evaluate the effectiveness of the interview.

8.2 The student will apply knowledge of word origins, derivations, and idioms and will use analogies, metaphors, and similes to extend vocabulary development.

8.4 The student will comprehend what is read from a variety of sources.
- Draw on background knowledge and knowledge of text structure to understand selections.
- Analyze details for relevance and accuracy.
- Read and follow instructions to assemble a model or simple structure.
- Evaluate and synthesize information to apply in written and oral presentations.

8.5 The student will write in a variety of forms, including narrative, expository and persuasive writings.
- Use prewriting strategies to generate and organize ideas.
- Focus on elaboration and organization.
- Select specific vocabulary and information.
- Use standard sentence formation, eliminating comma splices and other nonstandard forms of sentences that distract readers.
- Revise writing for word choice, appropriate organization, consistent point of view, and transitions among paragraphs.
- Edit final copies to ensure correct use of pronoun case, verb tense inflections, and adjective and adverb comparisons.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

8.6 The student will analyze mass media messages.
- Identify the persuasive technique being used.
- Describe the possible cause-effect relationships between mass media coverage and public opinion trends.
- Evaluate advertisements, editorials, and feature stories for relationships between intent and factual content.

Mathematics

Grade 7

7.1 The student will compare, order, and determine equivalent relationships between fractions, decimals, and percents, including scientific notation.

7.5 The student will solve consumer application problems involving tips, discounts, sales tax, and simple interest, using whole numbers, fractions, decimals, and percents.

7.20 The student will display data, using frequency distributions, line plots, stem-and-leaf plots, box-and-whisker plots, and scattergrams.

7.24 The student will use the following algebraic terms appopriately in written and/or oral expressions: equation, inequality, variable, expression, term, coefficient, domain, and range.

Grade 8

8.4 The student will solve practical problems involving whole numbers, integers, and rational numbers, including percents. Problems will be of varying complexities, involving real-life data.

8.13 The student will use information displayed in line, bar, circle, and picture graphs and histograms to make comparisons, predictions, and inferences.

8.14 The student will use a matrix to organize and describe data.

8.18 The student will describe and represent relations using tables, graphs, and rules.

8.19 The student will create and solve problems using proportions, formulas, and functions.

Algebra I

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

Computer/Technology

C/T8.1 The student will communicate through application software.

- Compose and edit a multi-page document at the keyboard, using word processing skills and writing process steps.
- Communicate with spreadsheets by entering data and setting up formulas.
- Communicate with databases by defining fields and entering data, sorting, and producing reports in various forms.
- Use advanced publishing software, graphics programs, and scanners to produce page layouts.
- Integrate databases, graphics, and spreadsheets into word-processed documents.

C/T8.2 The student will communicate through networks and telecommunication.

- Use local and worldwide network communication systems.
- Develop hypermedia "home page" documents that can be accessed by worldwide networks.

C/T8.3 The student will have a basic understanding of computer processing, storing, retrieval and transmission technologies and a practical appreciation of the relevant advantages and disadvantages of various processing, storage, retrieval, and transmission technologies.

C/T8.4 The student will process, store, retrieve, and transmit electronic information.

- Use search strategies to retrieve electronic information.
- Use electronic encyclopedias, almanacs, indexes, and catalogs to retrieve and select relevant information.
- Use laser discs with a computer in an interactive mode.
- Use local and wide-area networks and modem-delivered services to access and retrieve information from electronic databases.
- Use databases to perform research.

Keyboarding 6150 (Middle School)
CIP Code: 52.0408
Grades 6, 7, 8 (6/9/12/18 weeks)
Prerequisite: None

Description: This course is designed for middle school students to develop touch skills for entering alphabetic, numeric, and symbol information on a keyboard. Students learn to produce simple technical and nontechnical documents.

Note: This list contains competencies for an 18-week course. The list should be adjusted for courses of shorter duration.

Competencies	Measures of Achievement
1. Identify computer system components.	1. Written or oral identification, rated acceptable according to instructor's guideline
2. Boot, access, and exit operating system and software.	2. Student demonstration, all items on an instructor-prepared checklist rated acceptable
3. Input data and commands using peripherals (e.g., light pen, mouse, scanner).	3. Student demonstration, all items rated acceptable according to instructor's guidelines
4. Key alphabetic, numeric, and symbol information using a touch system and correct techniques.	4. Student demonstration, all items on an instructor-prepared checklist rated acceptable
5. Manipulate data/software/operating system using function keys, icons, touch screens, bars, and pull-down menus.	5. Student demonstration, all items on an instructor-prepared checklist rated acceptable
6. Use file and disk management techniques, such as copy, move, store, rename, retrieve, save, and delete.	6. Student-produced screen or hard copy, all items on instructor-prepared checklist rated acceptable
7. Improve keyboarding techniques by practicing drills and applications.	7. Student demonstration, rated acceptable on instructor-prepared technique chart
8. Increase keyboarding speed by practicing drills and applications.	8. Student-maintained record or line graph of timed writings, rated acceptable based on instructor's guidelines
9. Increase levels of accuracy by practicing keyboarding drills and applications.	9. Student-produced work, rated acceptable based on accuracy and time guidelines
10. Proofread copy.	10. Errors on instructor-prepared document identified and marked with 100% accuracy
11. Edit copy.	11. Student-produced copy from rough-draft material, error free
12. Produce nontechnical documents.	12. Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor

Competencies	Measures of Achievement
13. Produce technical documents.	13. Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor
14. Produce documents incorporating simple graphic elements.	14. Student-produced original document, rated acceptable according to criteria specified by the instructor
15. Compose nontechnical documents.	15. Student-produced original document, rated acceptable according to criteria specified by the instructor
16. Maintain work station, equipment, materials, and supplies.	16. Ongoing evaluation through instructor observation, documented on instructor-prepared checklist
17. Obtain assistance for preparing documents via electronic and hard copy references and documentation (e.g., help screen, spell-check, user's manual, dictionary, grammar-check, thesaurus).	17. Ongoing evaluation through instructor observation, documented on instructor-prepared checklist
18. Identify the purposes and goals of the student organization.	18. Written or oral identification, rated acceptable according to instructor's guidelines
19. Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	19. Student demonstration, all items rated acceptable according to instructor's guidelines
20. Investigate careers.	20. Written or oral report, rated acceptable according to criteria specified in instructor's guidelines
21. Create a portfolio containing representative examples of each type of document.	21. Student-assembled portfolio, rated acceptable based on instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 6

6.1 The student will analyze oral participation in small-group activities.
- Communicate as leader and contributor.
- Evaluate own contributions to discussions.
- Summarize and evaluate group activities.
- Analyze the effectiveness of participant interactions.

6.2 The student will listen critically and express opinions in oral presentations.
- Distinguish between facts and opinions.
- Compare and contrast points of view.
- Present a convincing argument.

6.3 The student will read and learn the meanings of unfamiliar words.
- Use knowledge of word origins and derivations.
- Use word-reference materials.

6.5 The student will demonstrate comprehension of a variety of selections.
- Identify questions to be answered.
- Make, confirm, or revise predictions as needed.
- Use context clues to read unfamiliar words.
- Draw conclusions and make inferences based on explicit and implied information.
- Organize information for use in written and oral presentations.
- Compare and contrast information about one topic contained in different selections.

6.7 The student will write narratives, descriptions, and explanations.
- Use a variety of planning strategies to generate and organize ideas.
- Establish central idea, organization, elaboration, and unity.
- Select vocabulary and information to enhance the central idea, tone, and voice.
- Expand and embed ideas by using modifiers, standard coordination, and subordination in complete sentences.
- Revise writing for clarity.
- Edit final copies for correct use of language: subject-verb and pronoun-antecedent agreement, consistent tense inflections, and adverb and adjective usage.
- Edit final copies for writing mechanics: format, capitalization, punctuation, and spelling.

6.8 The student will use writing as a tool for learning in all subjects.
- Make lists.
- Paraphrase what is heard or read.
- Summarize what is heard or read.
- Hypothesize.
- Connect knowledge within and across disciplines.
- Synthesize information to construct new concepts.

6.9 The student will select the best sources for a given purpose, including atlases, dictionaries, globes, interviews, telephone directories, encyclopedias, electronic databases, and the *Reader's Guide*.

Grade 7

7.1 The student will give and seek information in conversations and in group discussions.
- Use oral vocabulary and style appropriate for listeners.
- Communicate ideas and information orally in an organized and succinct manner.
- Ask probing questions to seek elaboration and clarification of ideas.
- Make supportive statements to communicate agreement or acceptance of others' ideas.

7.2 The student will identify the relationship between a speaker's verbal and nonverbal messages.
- Use verbal communication skills, such as word choice, pitch, feeling, tone, and voice.
- Use nonverbal communication skills, such as eye contact, posture, and gestures.
- Compare/contrast a speaker's verbal and nonverbal messages.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

7.6 The student will read and understand information from varied sources.
- Use knowledge of text structures to aid comprehension.
- Make, confirm, or revise predictions as needed.
- Distinguish fact from opinion in newspapers, magazines, and other print media.
- Summarize what is read.
- Organize and synthesize information for use in written and oral presentations.
- Describe how rhythm contributes to the purpose or theme of a poem.
- Compare and contrast the rhythm of poems with similar or dissimilar themes.

7.8 The student will develop narrative, expository, persuasive, and technical writings.
- Apply knowledge of prewriting strategies.
- Elaborate the central idea in an organized manner.
- Choose vocabulary and information that will cause a reader to perceive images and tone.
- Use clauses and phrases to embed context into sentences.
- Revise writing for clarity.
- Edit final copies to ensure correct use of homonyms, pronoun-antecedent agreement, subject-verb agreement, and verb tense consistency.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

7.9 The student will use a word processor to plan, draft, revise, and publish some writings.
- Use available word processing tools to check spelling, style, and grammar.

7.10 The student will apply knowledge of resources in preparing written and oral presentations.
- Use print and electronic sources to locate books and articles.
- Use a thesaurus to select more exact descriptive, specific, or effective vocabulary for writing.
- Use graphic organizers to organize information.
- Credit secondary reference sources.

Grade 8

8.1 The student will use interviewing techniques to gain information.
- Prepare and ask relevant questions for the interview.
- Make notes of responses.
- Compile and report responses.
- Evaluate the effectiveness of the interview.

8.2 The student will apply knowledge of word origins, derivations, and idioms and will use analogies, metaphors, and similes to extend vocabulary development.

8.4 The student will comprehend what is read from a variety of sources.
- Draw on background knowledge and knowledge of text structure to understand selections.
- Analyze details for relevance and accuracy.
- Read and follow instructions to assemble a model or simple structure.
- Evaluate and synthesize information to apply in written and oral presentations.

8.5 The student will write in a variety of forms, including narrative, expository and persuasive writings.
- Use prewriting strategies to generate and organize ideas.
- Focus on elaboration and organization.
- Select specific vocabulary and information.
- Use standard sentence formation, eliminating comma splices and other nonstandard forms of sentences that distract readers.
- Revise writing for word choice, appropriate organization, consistent point of view, and transitions among paragraphs.
- Edit final copies to ensure correct use of pronoun case, verb tense inflections, and adjective and adverb comparisons.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

Mathematics

Grade 6

6.4 The student will compare and order whole numbers, fractions, and decimals, using concrete materials, drawings or pictures, and mathematical symbols.

6.6 The student will
- solve problems that involve addition, subtraction, and/or multiplication with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less and express their answers in simplest form; and

- find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit. For divisors with more than one non-zero digit, estimation and calculators will be used.

6.7 The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions.

6.8 The student will solve multistep consumer application problems involving fractions and decimals and present data and conclusions in paragraphs, tables, or graphs.

6.13 The student will estimate angle measures using 45°, 90°, and 180° as referents and use the appropriate tools to measure the given angles.

6.18 The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including line, bar, and circle graphs and stem-and-leaf and box-and-whisker plots. Circle graphs will be limited to halves, fourths, and eighths.

Grade 7

7.1 The student will compare, order, and determine equivalent relationships between fractions, decimals, and percents, including scientific notation.

7.5 The student will solve consumer application problems involving tips, discounts, sales tax, and simple interest, using whole numbers, fractions, decimals, and percents.

7.6 The student will

- solve practical problems involving basic operations with integers by formulating rules for operating with integers and using a number line to compute; and
- explain the need for integers, using examples from real-life situations.

7.7 The student will use proportions to solve practical problems, including scale drawings that contain whole numbers, fractions, decimals, and percents.

Grade 8

8.4 The student will solve practical problems involving whole numbers, integers, and rational numbers, including percents. Problems will be of varying complexities, involving real-life data.

8.9 The student will apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) to geometric figures represented on graph paper. The student will identify applications of transformations such as tiling, fabric design, art, and scaling.

8.13 The student will use information displayed in line, bar, circle, and picture graphs and histograms to make comparisons, predictions, and inferences.

8.14 The student will use a matrix to organize and describe data.

8.18 The student will describe and represent relations using tables, graphs, and rules.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

Computer/Technology

C/T8.1 The student will communicate through application software.

- Compose and edit a multipage document at the keyboard, using word processing skills and the writing process steps.
- Communicate with spreadsheets by entering data and setting up formulas, analyzing data, and creating graphs or charts to visually represent data.
- Communicate with databases by defining fields and entering data, sorting, and producing reports in various forms.
- Use advanced publishing software, graphics programs, and scanners to produce page layouts.
- Integrate databases, graphics, and spreadsheets into word-processed documents.

C/T8.2 The student will communicate through networks and telecommunication.

- Use local and worldwide network communication systems.
- Develop hypermedia "home page" documents that can be accessed by worldwide networks.

C/T8.3 The student will have a basic understanding of computer processing, storing, retrieval and transmission technologies and a practical appreciation of the relevant advantages and disadvantages of various processing, storage, retrieval, and transmission technologies.

C/T8.4 The student will process, store, retrieve, and transmit electronic information.

- Use search strategies to retrieve electronic information.
- Use electronic encyclopedias, almanacs, indexes, and catalogs to retrieve and select relevant information.
- Use laser discs with a computer in an interactive mode.
- Use local and wide-area networks and modem-delivered services to access and retrieve information from electronic databases.
- Use databases to perform research.

History and Social Science

Grade 7

7.9 The student will demonstrate an understanding of the rights and responsibilities of citizens in America by

- describing ways individuals participate in the political process, such as registering and voting, communicating with government officials, participating in political campaigns, serving on juries and in voluntary appointed positions;
- describing and evaluating common forms of credit, savings, investments, purchases, contractual agreements, warranties, and guarantees; and
- analyzing career opportunities, in terms of individual abilities, skills, and education, and the changing supply and demand for those skills in the economy.

Keyboarding 6151 (Secondary)
CIP Code: 52.0408
Grades 9, 10, 11, 12 (18 weeks)
Prerequisite: None

Description: This course is designed for secondary school students to develop and enhance touch skills for entering alphabetic, numeric, and symbol information on a keyboard. Students learn to produce simple technical and non-technical documents.

Competencies	Measures of Achievement
1. Identify computer system components.	1. Written or oral identification, rated acceptable according to instructor's guidelines
2. Boot, access, and exit operating system and software.	2. Student demonstration, all items on an instructor-prepared checklist rated acceptable
3. Input data and commands using peripherals (e.g., light pen, mouse, scanner).	3. Student demonstration, rated acceptable according to instructor's guidelines
4. Key alphabetic, numeric, and symbol information using a touch system and correct techniques.	4. Student demonstration, all items on an instructor-prepared checklist rated acceptable
5. Manipulate data/software/operating system using function keys, icons, touch screens, bars, and pull-down menus.	5. Student demonstration, all items on an instructor-prepared checklist rated acceptable
6. Use file and disk management techniques, such as copy, move, store, rename, retrieve, save, and delete.	6. Student-produced screen or hard copy, all items on instructor-prepared checklist rated acceptable
7. Improve keyboarding techniques by practicing drills and applications.	7. Student demonstration, rated acceptable on an instructor-prepared technique chart
8. Increase keyboarding speed by practicing drills and applications.	8. Student-maintained record or line graph of timed writings, rated acceptable based on instructor's guidelines
9. Perform keyboarding drills and applications to increase level of accuracy.	9. Student-produced work, rated acceptable on accuracy and time guidelines
10. Proofread copy for accuracy, content, grammar, spelling, and punctuation.	10. Errors on instructor-prepared document identified and marked with 100% accuracy
11. Edit copy.	11. Student-produced copy from rough draft material, error free
12. Produce nontechnical documents.	12. Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor
13. Produce technical documents.	13. Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor

Competencies	Measures of Achievement
14. Produce documents incorporating simple graphic elements.	14. Student-produced documents, rated acceptable according to criteria specified by the instructor
15. Compose nontechnical documents.	15. Student-produced original document, rated acceptable according to criteria specified by instructor
16. Synthesize and key data directly from conversations, meetings, and media (real time data entry processed during the event).	16. Student-produced document, rated acceptable according to accuracy and format criteria specified by the instructor
17. Maintain work station, equipment, materials, and supplies.	17. Ongoing evaluation through instructor observation, documented on instructor-prepared checklist
18. Obtain assistance for preparing documents via electronic and hard copy references and documentation (e.g., help screen, spell-check, grammar-check, thesaurus, user's manual, dictionary).	18. Ongoing evaluation through instructor observation, documented on instructor-prepared checklist
19. Troubleshoot computer problems (e.g., cable hookups, power sources, and operational supplies).	19. Written or oral analysis, problem identified
20. Identify the purposes and goals of the student organization.	20. Written or oral identification, rated acceptable according to instructor's guidelines
21. Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	21. Student demonstration, all items rated acceptable according to instructor's guidelines
22. Develop a resume.	22. Student-produced document, rated acceptable based on business standard
23. Complete a job application form.	23. Student-produced documents, rated acceptable based on business standard
24. Create a portfolio containing representative examples of each type of document.	24. Student-assembled portfolio, rated acceptable based on instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 9

9.2 The student will make planned oral presentations.
- Include definitions to increase clarity.
- Use relevant details to support main ideas.
- Illustrate main ideas through anecdotes and examples.
- Cite information sources.
- Make impromptu responses to questions about presentation.

9.4 The student will read and analyze a variety of print materials.
- Identify a hypothesis to be confirmed, disproved, or modified.
- Evaluate clarity and accuracy of information.
- Synthesize information from sources and apply it in written and oral presentations.
- Identify questions not answered by a selected text.
- Extend general and specialized vocabulary through reading and writing.
- Read and follow instructions to use computer software, assemble or construct models or equipment, or complete a project.

9.6 The student will develop narrative, literary, expository, and technical writings to inform, explain, analyze, or entertain.
- Plan and organize writing.
- Communicate clearly the purpose of the writing.
- Write clear, varied sentences.
- Use specific vocabulary and information.
- Arrange paragraphs into a logical progression.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

9.7 The student will credit the sources of both quoted and paraphrased ideas.
- Define the meaning and consequences of plagiarism.
- Distinguish one's own ideas from information created or discovered by others.
- Use a style sheet method for citing secondary sources, such as MLA or APA.

9.8 The student will use electronic databases to access information.
- Identify key terms.
- Narrow the focus of a search.
- Scan and select resources.

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.
- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.8 The student will critique professional and peer writing.
- Analyze the writing of others.
- Describe how writing accomplishes its intended purpose.
- Suggest how writing might be improved.
- Apply knowledge of critical analysis to writing.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.
- Cite sources of information using a standard method of documentation.
- Edit for correct use of language, capitalization, punctuation, and spelling in final copies.
- Use available technology.

Algebra I

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

Keyboarding Applications 6152
CIP Code: 52.0408
Grade Levels 9, 10, 11, 12 (18, 36 weeks)
Prerequisite: None

Description: Students develop or refine touch skills for entering alphabetic, numeric, and symbol information on a keyboard. Students apply keyboarding skills to produce a variety of personal and business documents. (Students who can demonstrate touch keyboarding skills may test out and enter into the applications semester to develop document preparation skills.)

Note: This list contains competencies for a 36-week course; as an 18-week course, the list should be adjusted to avoid non-duplication of competencies taught in Keyboarding.

Competencies	Measures of Achievement
1. Identify computer system components.	1. Written or oral identification, rated acceptable according to instructor's guidelines
2. Boot, access, and exit operating system and software.	2. Student demonstration, all items on an instructor-prepared checklist rated acceptable
3. Input data and commands using peripherals (e.g., light pen, mouse, scanner).	3. Student demonstration, rated acceptable according to instructor's guidelines
4. Key alphabetic, numeric, and symbol information using a touch system and correct techniques.	4. Student demonstration, all items on an instructor-prepared checklist rated acceptable
5. Manipulate data/software/operating system using function keys, icons, touch screens, bars, and pull-down menus.	5. Student demonstration, all items on an instructor-prepared checklist rated acceptable
6. Use file and disk management techniques, such as setting up directories and subdirectories, copying, moving, storing, renaming, retrieving, saving, and deleting.	6. Student-produced screen or hard copy, all items on instructor-prepared checklist rated acceptable
7. Improve keyboarding techniques by practicing drills and applications.	7. Student demonstration, rated acceptable on an instructor-prepared technique chart
8. Increase keyboarding speed by practicing drills and applications.	8. Student-maintained record or line graph of timed writings, rated acceptable based on instructor's guidelines
9. Perform keyboarding drills and applications to increase level of accuracy.	9. Student-produced work, rated acceptable according to accuracy and time guidelines
10. Produce nontechnical documents.	10. Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor

Competencies	Measures of Achievement
11. Produce technical documents.	11. Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor
12. Compose nontechnical documents.	12. Student-produced original document, rated acceptable according to criteria specified by instructor
13. Compose technical documents.	13. Student-produced original document, rated acceptable according to criteria specified by instructor
14. Refine composition skills.	14. Student-produced original document and rewritten composition, refinements, rated acceptable according to instructor's guidelines
15. Keyboard and format addresses.	15. Student-produced document, rated acceptable according to instructor-prepared criteria
16. Keyboard and format columns, tables, graphs, and charts.	16. Student-produced document, rated acceptable according to instructor-prepared guidelines
17. Keyboard and format a letter, memorandum, and report from rough draft material.	17. Student-produced document, rated acceptable according to instructor-prepared guidelines
18. Synthesize and key data directly from conversations, meetings, and media (real time data entry processed during the event).	18. Student-produced document, rated acceptable according to accuracy and format criteria specified by instructor
19. Keyboard and format research-related documents including outlines, bibliographies, and manuscripts.	19. Student-produced document, rated acceptable according to instructor-prepared guidelines
20. Complete special forms (e.g., applications, invoices, purchase orders).	20. Student-completed forms, rated acceptable according to instructor-prepared guidelines
21. Produce copy using paper of varying dimensions.	21. Student-produced copies, rated acceptable according to instructor's guidelines
22. Merge files to produce form letters.	22. Student-produced document, rated acceptable according to instructor-prepared guidelines
23. Proofread for accuracy, content, grammar, spelling, and punctuation.	23. All errors on an instructor-prepared document identified and marked with 100% accuracy
24. Obtain assistance for preparing documents via online electronic and hard copy references and documentation (e.g., help screen, spell-check, grammar-check, thesaurus, user's manual, dictionary).	24. Ongoing evaluation through instructor observation, documented on instructor-prepared checklist

Competencies	Measures of Achievement
25. Interpret charts, graphs, illustrations, tables, and other visual aids.	25. Written or oral analysis, rated acceptable according to criteria specified by instructor
26. Edit technical and nontechnical documents.	26. Student produced copy from rough draft material, rated acceptable according to instructor's guidelines and per evaluation
27. Enhance layout of documents by using features such as leader tabs, shading, lines, and graphics.	27. Student-produced document, rated acceptable according to instructor-prepared guidelines and peer evaluation
28. Maintain work station, equipment, materials, and supplies.	28. Ongoing evaluation through instructor observation, documented on instructor-prepared checklist
29. Troubleshoot computer problems (e.g., cable hookups, power sources, and operational supplies).	29. Written or oral analysis, problem identified
30. Identify the purposes and goals of the student organization.	30. Written or oral identification, rated acceptable according to instructor's guidelines
31. Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	31. Student demonstration, all items rated acceptable according to instructor's guidelines
32. Develop a resume.	32. Student-produced document, rated acceptable based on business standards
33. Complete a job application form.	33. Student-produced document, rated acceptable based on business standards
34. Demonstrate successful interviewing techniques.	34. Student demonstration and analysis, rated acceptable according to business standards
35. Compose an interview follow-up letter.	35. Student-produced document, rated acceptable according to business standards
36. Create a portfolio containing representative examples of each type of document.	36. Student-assembled portfolio, rated acceptable based on instructor's guidelines
37. Apply for promotion.	37. Student-produced document, rated acceptable according to business standards
38. Identify the steps to follow in resigning from a position.	38. Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 9

9.2 The student will make planned oral presentations.
- Include definitions to increase clarity.
- Use relevant details to support main ideas.
- Illustrate main ideas through anecdotes and examples.
- Cite information sources.
- Make impromptu responses to questions about presentation.

9.4 The student will read and analyze a variety of print materials.
- Identify a hypothesis to be confirmed, disproved, or modified.
- Evaluate clarity and accuracy of information.
- Synthesize information from sources and apply it in written and oral presentations.
- Identify questions not answered by a selected text.
- Extend general and specialized vocabulary through reading and writing.
- Read and follow instructions to use computer software, assemble or construct models or equipment, or complete a project.

9.6 The student will develop narrative, literary, expository, and technical writings to inform, explain, analyze, or entertain.
- Plan and organize writing.
- Communicate clearly the purpose of the writing.
- Write clear, varied sentences.
- Use specific vocabulary and information.
- Arrange paragraphs into a logical progression.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

9.7 The student will credit the sources of both quoted and paraphrased ideas.
- Define the meaning and consequences of plagiarism.
- Distinguish one's own ideas from information created or discovered by others.
- Use a style sheet method for citing secondary sources, such as MLA or APA.

9.8 The student will use electronic databases to access information.
- Identify key terms.
- Narrow the focus of a search.
- Scan and select resources.

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.
- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.8 The student will critique professional and peer writing.
- Analyze the writing of others.
- Describe how writing accomplishes its intended purpose.
- Suggest how writing might be improved.
- Apply knowledge of critical analysis to writing.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.

- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.
- Cite sources of information using a standard method of documentation.
- Edit for correct use of language, capitalization, punctuation, and spelling in final copies.
- Use available technology.

Algebra I

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

Make It Your Business 6110
CIP Code: 52.0701
Grades 6, 7, 8, 9 (6/9/12/18 weeks)
Prerequisite: None

Description: Students are provided opportunities to run a small group or class business based on their own design for offering a service or product needed at their school. They learn business terminology, basic entrepreneurship concepts, and fundamental business operating principles in this course. Design of course content allows for interdisciplinary instruction.

Note: This list contains competencies for an 18-week course. The list should be adjusted for courses of shorter duration.

Competencies		Measures of Achievement	
DUTY AREA 1. Exploring Entrepreneurship			
1.1	Identify characteristics of entrepreneurs.	1.1	Instructor-prepared test, average or above rating
1.2	Explain the benefits and liabilities of starting a business.	1.2	Written or oral report, rated acceptable based on instructor's guidelines
1.3	Select a type of business ownership.	1.3	Written or oral report (may include comparison of student interest inventory with economic conditions and production factors), rated acceptable based on instructor's guidelines
DUTY AREA 2. Conducting a Needs Assessment			
2.1	Identify customer needs.	2.1	Student-produced survey and results, rated acceptable based on instructor-prepared checklist
2.2	Analyze competitive environment.	2.2	Written and/or oral report, rated acceptable based on instructor's guidelines

Competencies	Measures of Achievement
DUTY AREA 3. Planning the Product or Service	
3.1 Select product or service.	3.1 Individual or group presentation of an approved product or service, rated acceptable based on instructor's guidelines
3.2 Conduct market research.	3.2 Individual or group survey, rated acceptable based on instructor's guidelines
3.3 Select resources, mentors, and professional advisors (e.g., accountant, attorney).	3.3 Individual or group-generated list, rated acceptable based on instructor's guidelines
DUTY AREA 4. Preparing a Marketing Strategy	
4.1 Select target market.	4.1 Written and/or oral report, rated acceptable based on instructor's guidelines
4.2 Determine price.	4.2 Instructor-prepared worksheet, calculations completed with 100% accuracy
4.3 Select distribution method(s).	4.3 Individual or oral presentation, rated acceptable based on instructor's guidelines
4.4 Develop a promotional campaign.	4.4 Student-produced portfolio, rated acceptable based on instructor's guidelines (portfolio may contain layouts, storyboards, audiovisuals, posters, telemarketing scripts, direct mail, etc.)
DUTY AREA 5. Developing the Financial Plan	
5.1 Estimate expenses.	5.1 Instructor-prepared worksheet (may include start-up costs and operating expense), calculations completed with 100% accuracy
5.2 Identify break-even point.	5.2 Instructor-prepared worksheet, calculations completed with 100% accuracy
5.3 Set profit goal.	5.3 Instructor-prepared worksheet, calculations completed with 100% accuracy
5.4 Identify sources of capital.	5.4 Small group presentation, rated acceptable by community business person assisted by instructor's guidelines

Competencies	Measures of Achievement
DUTY AREA 6. Planning Production	
6.1 Identify work tasks.	6.1 Student-prepared list, rated acceptable based on instructor's guidelines
6.2 Develop job description.	6.2 Student-prepared descriptions, rated acceptable based on instructor's guidelines
6.3 Establish work flow.	6.3 Student-prepared diagram, rated acceptable based on instructor's guidelines
6.4 Develop quality-control procedures.	6.4 Student-prepared plan, rated acceptable based on instructor's guidelines
DUTY AREA 7. Staffing the Business	
7.1 Hire employee.	7.1 Individual or panel student-conducted employee interviews, rated acceptable based on instructor's guidelines
7.2 Train employee.	7.2 Student-trained employees, rated acceptable based on instructor's guidelines
7.3 Evaluate staff.	7.3 Student-conducted evaluation, rated acceptable based on instructor's guidelines
DUTY AREA 8. Operating the Business	
8.1 Produce product [or perform service].	8.1 Student-produced product [or service], rated acceptable based on instructor's guidelines
8.2 Implement marketing strategy.	8.2 Student-generated written or oral progress report, rated acceptable based on instructor's guidelines
8.3 Maintain business records.	8.3 Student-prepared records, calculations completed with 100% accuracy

Competencies	Measures of Achievement
DUTY AREA 9. Evaluating the Business	
9.1 Evaluate all functions of the business.	9.1 Student-prepared written report, rated acceptable based on instructor's guidelines
9.2 Allocate profit.	9.2 Profit distributed according to school board policy
DUTY AREA 10. Participating in Co-Curricular Activities	
10.1 Identify the purposes and goals of the student organization.	10.1 Written or oral identification, rated acceptable according to instructor's guidelines
10.2 Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	10.2 Student demonstration, all items rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 6

6.1 The student will analyze oral participation in small-group activities.
- Communicate as leader and contributor.
- Evaluate own contributions to discussions.
- Summarize and evaluate group activities.
- Analyze the effectiveness of participant interactions.

6.2 The student will listen critically and express opinions in oral presentations.
- Distinguish between facts and opinions.
- Compare and contrast points of view.
- Present a convincing argument.

6.3 The student will read and learn the meanings of unfamiliar words.
- Use knowledge of word origins and derivations.
- Use word-reference materials.

6.5 The student will demonstrate comprehension of a variety of selections.
- Identify questions to be answered.
- Make, confirm, or revise predictions as needed.
- Use context clues to read unfamiliar words.
- Draw conclusions and make inferences based on explicit and implied information.
- Organize information for use in written and oral presentations.
- Compare and contrast information about one topic contained in different selections.

6.7 The student will write narratives, descriptions, and explanations.
- Use a variety of planning strategies to generate and organize ideas.
- Establish central idea, organization, elaboration, and unity.
- Select vocabulary and information to enhance the central idea, tone, and voice.
- Expand and embed ideas by using modifiers, standard coordination, and subordination in complete sentences.
- Revise writing for clarity.
- Edit final copies for correct use of language: subject-verb and pronoun-antecedent agreement, consistent tense inflections, and adverb and adjective usage.
- Edit final copies for writing mechanics: format, capitalization, punctuation, and spelling.

6.8 The student will use writing as a tool for learning in all subjects.
- Make lists.
- Paraphrase what is heard or read.
- Summarize what is heard or read.
- Hypothesize.
- Connect knowledge within and across disciplines.
- Synthesize information to construct new concepts.

6.9 The student will select the best sources for a given purpose, including atlases, dictionaries, globes, interviews, telephone directories, encyclopedias, electronic databases, and the *Reader's Guide*.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

Grade 7

7.1 The student will give and seek information in conversations and in group discussions.
- Use oral vocabulary and style appropriate for listeners.
- Communicate ideas and information orally in an organized and succinct manner.
- Ask probing questions to seek elaboration and clarification of ideas.
- Make supportive statements to communicate agreement or acceptance of others' ideas.

7.2 The student will identify the relationship between a speaker's verbal and nonverbal messages.
- Use verbal communication skills, such as word choice, pitch, feeling, tone, and voice.
- Use nonverbal communication skills, such as eye contact, posture, and gestures.
- Compare/contrast a speaker's verbal and nonverbal messages.

7.3 The student will identify persuasive messages in nonprint media, including television, radio, and films.
- Identify persuasive technique used.
- Distinguish between fact and opinion.

7.4 The student will use analogies, idioms, similes, and metaphors to extend understanding of word meanings.

7.6 The student will read and understand information from varied sources.
- Use knowledge of text structures to aid comprehension.
- Make, confirm, or revise predictions as needed.
- Distinguish fact from opinion in newspapers, magazines, and other print media.
- Summarize what is read.
- Organize and synthesize information for use in written and oral presentations.

7.8 The student will develop narrative, expository, persuasive, and technical writings.
- Apply knowledge of prewriting strategies.
- Elaborate the central idea in an organized manner.
- Choose vocabulary and information that will cause a reader to perceive images and tone.
- Use clauses and phrases to embed context into sentences.
- Revise writing for clarity.
- Edit final copies to ensure correct use of homonyms, pronoun-antecedent agreement, subject-verb agreement, and verb tense consistency.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

7.9 The student will use a word processor to plan, draft, revise, and publish some writings.
- Use available word processing tools to check spelling, style, and grammar.

7.10 The student will apply knowledge of resources in preparing written and oral presentations.
- Use print and electronic sources to locate books and articles.
- Use a thesaurus to select more exact descriptive, specific, or effective vocabulary for writing.
- Use graphic organizers to organize information.
- Credit secondary reference sources.

Grade 8

8.1 The student will use interviewing techniques to gain information.
- Prepare and ask relevant questions for the interview.
- Make notes of responses.
- Compile and report responses.
- Evaluate the effectiveness of the interview.

8.2 The student will apply knowledge of word origins, derivations, and idioms and will use analogies, metaphors, and similes to extend vocabulary development.

8.4 The student will comprehend what is read from a variety of sources.
- Draw on background knowledge and knowledge of text structure to understand selections.
- Analyze details for relevance and accuracy.
- Read and follow instructions to assemble a model or simple structure.
- Evaluate and synthesize information to apply in written and oral presentations.

8.5 The student will write in a variety of forms, including narrative, expository and persuasive writings.

- Use prewriting strategies to generate and organize ideas.
- Focus on elaboration and organization.
- Select specific vocabulary and information.
- Use standard sentence formation, eliminating comma splices and other nonstandard forms of sentences that distract readers.
- Revise writing for word choice, appropriate organization, consistent point of view, and transitions among paragraphs.
- Edit final copies to ensure correct use of pronoun case, verb tense inflections, and adjective and adverb comparisons.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

8.6 The student will analyze mass media messages.

- Identify the persuasive technique being used.
- Describe the possible cause-effect relationships between mass media coverage and public opinion trends.
- Evaluate advertisements, editorials, and feature stories for relationships between intent and factual content.

Grade 9

9.2 The student will make planned oral presentations.

- Include definitions to increase clarity.
- Use relevant details to support main ideas.
- Illustrate main ideas through anecdotes and examples.
- Cite information sources.
- Make impromptu responses to questions about presentations.

9.4 The student will read and analyze a variety of print materials.

- Identify a hypothesis to be confirmed, disproved, or modified.
- Evaluate clarity and accuracy of information.
- Synthesize information from sources and apply it in written and oral presentations.
- Identify questions not answered by a selected text.
- Extend general and specialized vocabulary through reading and writing.
- Read and follow instructions to use computer software, assemble or construct models or equipment, or complete a project.

9.6 The student will develop narrative, literary, expository, and technical writings to inform, explain, analyze, or entertain.

- Plan and organize writing.
- Communicate clearly the purpose of the writing.
- Write clear, varied sentences.
- Use specific vocabulary and information.
- Arrange paragraphs into a logical progression.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

Mathematics

Grade 6

6.1 The student will identify representations of a given percent and describe orally and in writing the equivalence relationship between fractions, decimals, and percents.

6.4 The student will compare and order whole numbers, fractions, and decimals, using concrete materials, drawings or pictures, and mathematical symbols.

6.6 The student will
- solve problems that involve addition, subtraction, and/or multiplication with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less and express their answers in simplest form; and
- find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit. For divisors with more than one non-zero digit, estimation and calculators will be used.

6.7 The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions.

6.8 The student will solve multistep consumer application problems involving fractions and decimals and present data and conclusions in paragraphs, tables, or graphs.

6.18 The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including line, bar, and circle graphs and stem-and-leaf and box-and-whisker plots. Circle graphs will be limited to halves, fourths, and eighths.

6.19 The student will describe the mean, median, and mode as measures of central tendency and determine their meaning for a set of data.

Grade 7

7.1 The student will compare, order, and determine equivalent relationships between fractions, decimals, and percents, including scientific notation.

7.5 The student will solve consumer application problems involving tips, discounts, sales tax, and simple interest, using whole numbers, fractions, decimals, and percents.

7.7 The student will use proportions to solve practical problems, including scale drawings that contain whole numbers, fractions, decimals, and percents.

7.17 The student will determine the probability of a given simple event and express that probability as a ratio, decimal, or a percent as appropriate for the given situation.

7.19 The student will create and solve problems involving the mean, median, mode, and range of a set of data.

7.21 The student will make inferences and predictions based on the analysis of a set of data that the student(s) collect.

Grade 8

8.4 The student will solve practical problems involving whole numbers, integers, and rational numbers, including percents. Problems will be of varying complexities, involving real-life data.

8.13 The student will use information displayed in line, bar, circle, and picture graphs and histograms to make comparisons, predictions, and inferences.

8.14 The student will use a matrix to organize and describe data.

8.18 The student will describe and represent relations using tables, graphs, and rules.

8.19 The student will create and solve problems using proportions, formulas, and functions.

Algebra I

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Computer Mathematics

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

Grade 7

7.6 The student will explain the structure and operation of the United States economy as compared with other economies, with emphasis on

- the basic concepts of free market, as described by Adam Smith, and of communism, as described by Karl Marx;
- the concepts of supply and demand, scarcity, choices, trade-offs, private ownership, incentives, consumer sovereignty, markets, and competition;
- private and public financial institutions;
- the economic impact of consumption, saving and investment, and borrowing by individuals, firms, and governments; and
- the differences between free market, centrally planned, and mixed economies.

Principles of Business and Marketing 6115
CIP Code: 52.0101
Grades 9, 10 (18, 36 weeks)
Prerequisite: None

Description: Students explore the roles of business and marketing in the free enterprise system and the global economy. Students study how the American economy operates and prepare to make decisions as consumers, wage earners, and citizens.

Note: This list contains competencies for a 36-week course. The list should be adjusted for courses of shorter duration.

Competencies		Measures of Achievement	
DUTY AREA 1. Exploring the Worlds of Business and Marketing			
1.1	Compare and contrast major types of business ownership.	1.1	Written or oral description, rated acceptable based on instructor-prepared guidelines
1.2	Describe the business and marketing functions.	1.2	Instructor-prepared test, average or above rating
1.3	Describe the channels of distribution.	1.3	Student-completed worksheet, average or above rating
1.4	Identify the components of the marketing process.	1.4	Instructor-prepared test, average or above rating
1.5	Explain the importance of marketing.	1.5	Instructor-prepared test, average or above rating
1.6	Summarize the marketing concept.	1.6	Instructor-prepared test, average or above rating
1.7	Describe how the elements of the marketing mix affect the target market.	1.7	Oral or written description, all items rated acceptable based on instructor-prepared rating form
1.8	Explain product planning.	1.8	Written or oral description of a new product and ways to market it, all items rated acceptable on instructor-prepared rating form
1.9	Investigate technological trends in business and marketing.	1.9	Written and/or oral report, average or above rating based on instructor's guidelines
DUTY AREA 2. Understanding the Role of Economics in a Global Economy			
2.1	Identify the economic process.	2.1	Instructor-prepared test, average or above rating

Competencies		Measures of Achievement	
2.2	Explain the importance of economics.	2.2	Small group presentation, rated acceptable based on criteria specified in instructor's guidelines
2.3	Distinguish among economic resources.	2.3	Student demonstration, all items rated acceptable on an instructor-prepared checklist
2.4	Identify characteristics of free enterprise.	2.4	Simulated activity, all items rated acceptable based on instructor's guidelines
2.5	Compare the American economic system with other systems.	2.5	Small group activity, rated acceptable based on criteria specified in instructor's guidelines
2.6	Explain economic interdependence.	2.6	Small group presentation, all items rated acceptable based on instructor's guidelines
2.7	Describe problems and benefits of world trade.	2.7	Written and/or oral research reports, rated acceptable according to instructor's guidelines
DUTY AREA 3. Developing Communication and Interpersonal Skills			
3.1	Place/receive telephone calls.	3.1	Role-play activity, student participation rated acceptable according to instructor's guidelines
3.2	Identify ethical and unethical business practices.	3.2	Case study worksheet, average or above rating based on instructor-prepared guidelines
3.3	Determine the social responsibility of a business to the community.	3.3	Individual report based on an interview, average or above rating on instructor-prepared rating sheet
3.4	Employ listening skills.	3.4	Role-play activities, student demonstration evaluated as acceptable on instructor-prepared rating form
3.5	Demonstrate nonverbal communication.	3.5	Role-play activity, student demonstration evaluated as acceptable on instructor-prepared rating form
3.6	Identify how individual traits affect interpersonal relations.	3.6	Role-play activity, student demonstration evaluated as acceptable on instructor-prepared rating form
DUTY AREA 4. Making Consumer Choices			
4.1	Identify rights and responsibilities of consumers.	4.1	Student-completed worksheet, average or above rating based on instructor-prepared rating form
4.2	Prepare and balance a budget.	4.2	Student-produced budget, prepared and balanced in accordance with instructor's guidelines

Competencies		Measures of Achievement	
4.3	Record income and expenditures.	4.3	Student-completed form, average or above rating based on instructor-prepared rating form
4.4	Compute the per unit cost of products.	4.4	Student-completed worksheet, average or above rating based on instructor-prepared rating form
4.5	Identify methods of handling consumer complaints.	4.5	Role-play activity, student demonstration evaluated as acceptable based on instructor-prepared rating form
4.6	Identify various consumer protection agencies.	4.6	Written or oral description, rated acceptable based on instructor-provided guidelines
4.7	Identify components of a guarantee, warranty, and contract.	4.7	Individual or small group activity, student demonstration rated acceptable on instructor-prepared rating form
4.8	Explain information found on product labels.	4.8	Written or oral presentation, average or above rating based on instructor-prepared rating form
4.9	Complete income tax forms.	4.9	Student-completed federal and state tax forms, 100% accuracy
4.10	Compute gross and net pay.	4.10	Student-completed worksheet, calculations completed with 100% accuracy
4.11	Identify types of insurance.	4.11	Written or oral presentation, rated acceptable based on instructor's guidelines
4.12	Identify banking services.	4.12	Written or oral presentation, rated acceptable based on instructor's guidelines
4.13	Maintain checking and saving accounts.	4.13	Simulation, rated acceptable based on instructor's guidelines
4.14	Compare the sources of consum *r* credit.	4.14	Written analysis of sources, rated acceptable based on instructor's guidelines
4.15	Select the best buy among products and services.	4.15	Written or oral presentation, rated acceptable based on instructor's guidelines
4.16	Complete a sample credit application.	4.16	Student-completed credit application, rated acceptable based on creditor's guidelines
DUTY AREA 5. Developing Employability Skills			
5.1	Identify the purposes and goals of the student organization.	5.1	Written or oral identification, rated acceptable according to instructor's guidelines

Competencies		Measures of Achievement	
5.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	5.2	Student demonstration, all items rated acceptable according to instructor's guidelines
5.3	Explore careers.	5.3	Oral and written reports, average or above rating based on instructor's guidelines
5.4	Assess individual interests and aptitudes.	5.4	Student-completed survey, rated acceptable based on instructor-prepared guidelines
5.5	Identify sources of employment information.	5.5	Written report based on individual research, average or above rating based on instructor-prepared guidelines
5.6	Write a letter of application.	5.6	Student-produced letter, rated acceptable based on instructor-prepared guidelines
5.7	Prepare a resume.	5.7	Student-produced resume, rated acceptable based on instructor-prepared guidelines
5.8	Complete an employment application form.	5.8	Student-completed application form, rated acceptable based on instructor-prepared guidelines
5.9	Complete an employment interview.	5.9	Role-play activity, evaluated as acceptable based on instructor-prepared rating form
5.10	Design a portfolio.	5.10	Student-produced portfolio, containing letter of application, resume, and completed application
5.11	Prepare an interview follow-up letter.	5.11	Student-produced follow-up letter, rated acceptable based on instructor's guidelines
5.12	Identify characteristics of successful workers.	5.12	Role-play activities, evaluated as acceptable on instructor-prepared checklist
5.13	Apply for a promotion.	5.13	Student-produced document, rated acceptable according to business standards
5.14	Identify the steps to follow in resigning from a position.	5.14	Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 9

9.2 The student will make planned oral presentations.
- Include definitions to increase clarity.
- Use relevant details to support main ideas.
- Illustrate main ideas through anecdotes and examples.
- Cite information sources.
- Make impromptu responses to questions about presentation.

9.4 The student will read and analyze a variety of print materials.
- Identify a hypothesis to be confirmed, disproved, or modified.
- Evaluate clarity and accuracy of information.
- Synthesize information from sources and apply it in written and oral presentations.
- Identify questions not answered by a selected text.
- Extend general and specialized vocabulary through reading and writing.
- Read and follow instructions to use computer software, assemble or construct models or equipment, or complete a project.

9.6 The student will develop narrative, literary, expository, and technical writings to inform, explain, analyze, or entertain.
- Plan and organize writing.
- Communicate clearly the purpose of the writing.
- Write clear, varied sentences.
- Use specific vocabulary and information.
- Arrange paragraphs into a logical progression.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

9.7 The student will credit the sources of both quoted and paraphrased ideas.
- Define the meaning and consequences of plagiarism.
- Distinguish one's own ideas from information created or discovered by others.
- Use a style sheet method for citing secondary sources, such as MLA or APA.

9.8 The student will use electronic databases to access information.
- Identify key terms.
- Narrow the focus of a search.
- Scan and select resources.

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.2 The student will critique oral reports of small-group learning activities.
- Evaluate one's own role in preparation and delivery of oral reports.
- Evaluate effectiveness of group process in preparation and delivery of oral reports.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.

*Academic SOLs are an essential component of vocational edsucation and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Algebra I

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Computer Mathematics

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

History

Grade 10

10.4 The student will analyze how certain cultural characteristics can link or divide regions, in terms of language, ethnic heritage, religion, political philosophy, social and economic systems, and shared history.

10.6 The student will analyze past and present trends in human migration and cultural interaction as they are influenced by social, economic, political, and environmental factors.

10.12 The student will analyze the patterns and networks of economic interdependence, with emphasis on formation of multi national economic unions, international trade, and the theory of competitive advantage, in terms of job specialization, competition for resources, and access to labor, technology, transportation, and communications.

10.13 The student will distinguish between developed and developing countries and relate the level of economic development to the quality of life.

10.15 The student will apply geography to interpret the past, understand the present, and plan for the future by
- using a variety of maps, charts, and documents to explain historical migration of people, expansion and disintegration of empires, and the growth of economic systems; and
- relating current events to the physical and human characteristics of places and regions.

Occupational Courses

Accounting

Advanced Accounting

Business Law

Business Management

Computer Information Systems

(Advanced) Computer Information Systems

Desktop/Multimedia Presentations

Finance

Legal Systems Administration

Medical Systems Administration

Notetaking

Office Administration

Word Processing

Accounting 6320
CIP Code: 52.0302
Grade Levels: 10, 11, 12 (36 weeks)
Prerequisite: Keyboarding recommended

Description: Students study the basic principles, concepts, and practices of the accounting cycle. Students learn fundamental accounting procedures using a manual and an electronic system.

Competencies		Measures of Achievement	
DUTY AREA 1. Understanding the Accounting Cycle			
1.1	Describe the purpose of accounting and the role it plays in our economy.	1.1	Written or oral description, rated acceptable based on criteria specified in instructor's guidelines
1.2	Demonstrate the effects of transactions on the accounting equation.	1.2	Student-completed activity, rated acceptable based on instructor's guidelines
1.3	Use source documents.	1.3	Simulated activity, rated acceptable based on instructor's guidelines
1.4	Prepare a chart of accounts using proper numerical sequencing.	1.4	Student-completed activity, rated acceptable based on instructor's guidelines
1.5	Diagram transactions through the use of T-accounts.	1.5	Student-completed activity, rated acceptable based on instructor's guidelines
1.6	Record transactions in a general journal.	1.6	Student-completed activity, rated acceptable based on instructor's guidelines
1.7	Post general journal entries to the general ledger and update the account balances.	1.7	Student-completed activity, rated acceptable based on instructor's guidelines
1.8	Prepare a trial balance.	1.8	Student-completed activity, completed with 100% accuracy
1.9	Calculate and record end-of-period adjustments.	1.9	Student-completed activity, rated acceptable based on instructor's guidelines
1.10	Prepare financial statements.	1.10	Student-completed activity, completed with 100% accuracy
1.11	Update accounts through adjusting and closing entries.	1.11	Student-completed activity, rated acceptable based on instructor's guidelines
1.12	Prepare post-closing trial balance.	1.12	Student-completed activity, completed with 100% accuracy
1.13	Develop a flowchart illustrating the progression from source documents to journals to general ledger to financial report.	1.13	Student completed flowchart, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
1.14	Demonstrate competence in the structure and sequence of the accounting cycle using an electronic system.	1.14	Student-completed project/simulation, rated acceptable based on instructor's guidelines
DUTY AREA 2. Implementing Specialized Accounting Procedures			
2.1	Compare the accounting implications of different types of business ownership.	2.1	Written or oral report, rated acceptable based on instructor's guidelines
2.2	Differentiate between a service and a merchandising business.	2.2	Instructor-prepared test, rated average or above
2.3	Analyze transactions relating to the purchase of merchandise and record into special journals.	2.3	Student-completed activity, rated acceptable based on instructor's guidelines
2.4	Analyze transactions relating to sale of merchandise and record into special journals.	2.4	Student-completed activity, rated acceptable based on instructor's guidelines
2.5	Post from general and special journals to a general and/or subsidiary ledger.	2.5	Student-completed activity, rated acceptable based on instructor's guidelines
2.6	Prepare schedules for subsidiary ledgers.	2.6	Student-completed activity, completed with 100% accuracy
2.7	Generate trial balance and end-of-period adjustments.	2.7	Student-completed activity, completed with 100% accuracy
2.8	Create financial statements.	2.8	Student-completed activity, completed with 100% accuracy
2.9	Analyze financial statements.	2.9	Student-completed activity, rated acceptable based on instructor's guidelines
2.10	Update accounts through adjusting and closing entries.	2.10	Student-completed activity, rated acceptable based on instructor's guidelines
2.11	Prepare a post-closing trial balance.	2.11	Student-completed activity, completed with 100% accuracy
2.12	Demonstrate competence in implementing specialized accounting via an electronic system.	2.12	Student-completed project/simulation, rated acceptable based on instructor's guidelines.
DUTY AREA 3. Implementing Payroll and Banking Procedures			
3.1	Describe methods used to determine gross earnings (piece-rate, etc.).	3.1	Written or oral description, rated acceptable according to instructor's guidelines
3.2	Explain the purpose of withholdings and other deductions.	3.2	Written or oral explanation, rated acceptable according to instructor's guidelines
3.3	Compute employee gross earnings, deductions, and net pay.	3.3	Student-completed activity, completed with 100% accuracy

Competencies		Measures of Achievement	
3.4	Record in a journal and post transactions associated with payroll activities.	3.4	Student-completed activity, rated acceptable based on instructor's guidelines
3.5	Create and maintain employee earnings records.	3.5	Student-completed activity, completed with 100% accuracy
3.6	Generate payroll checks.	3.6	Student-completed activity, completed with 100% accuracy
3.7	Reconcile a bank statement, prepare journal entries, and post.	3.7	Student-completed activity, rated acceptable based on instructor's guidelines
3.8	Prepare journal entries to establish and replenish the petty cash fund.	3.8	Student-completed activity, rated acceptable based on instructor's guidelines
3.9	Use accounting software to process transactions and produce financial statements.	3.9	Student-completed activity, rated acceptable based on instructor's guidelines
DUTY AREA 4. Implementing Accounting for Special Procedures			
4.1	Calculate and record depreciation of plant assets.	4.1	Student-completed activity, rated acceptable based on instructor's guidelines
4.2	Determine and record uncollectible accounts receivable.	4.2	Student-completed activity, rated acceptable based on instructor's guidelines
4.3	Record inventories.	4.3	Student-completed activity, rated acceptable based on instructor's guidelines
4.4	Calculate and record notes payable and notes receivable.	4.4	Student-completed activity, rated acceptable based on instructor's guidelines
4.5	Record other costs of doing business (e.g., overhead costs).	4.5	Student-completed activity, rated acceptable based on instructor's guidelines
DUTY AREA 5. Understanding Business Ethics			
5.1	Identify confidentiality concepts and policies.	5.1	Student-completed activity, rated acceptable according to the American Institute of Certified Public Accountants' (AICPA) Professional Standards and Professional Conduct
5.2	Identify characteristics of professional conduct.	5.2	Case studies, rated acceptable according to the American Institute of Certified Public Accountants' (AICPA) Professional Standards and Professional Conduct
DUTY AREA 6. Developing Career Exploration and Employability Skills			
6.1	Identify the purposes and goals of the student organization.	6.1	Written or oral identification, rated acceptable according to instructor's guidelines

Competencies		Measures of Achievement	
6.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	6.2	Student demonstration, all items rated acceptable according to instructor's guidelines
6.3	Develop a career plan.	6.3	Student-produced report (written, oral, or multimedia), must contain research, documentation of interviews, goals, and strategies
6.4	Prepare or update resume.	6.4	Student-produced resume, rated acceptable based on industry standards
6.5	Apply for a promotion.	6.5	Student-produced document, rated acceptable based on industry standards
6.6	Identify the steps to follow in resigning from a position.	6.6	Written or oral identification, rated acceptable based on instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.
- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.
- Cite sources of information using a standard method of documentation.
- Edit for correct use of language, capitalization, punctuation, and spelling in final copies.
- Use available technology.

Algebra I

A.2 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables. Students will choose an appropriate computational technique, such as mental mathematics, calculator, or paper and pencil.

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

A.5 The student will analyze a given set of data for the existence of a pattern, represent the pattern algebraically and graphically, if possible, and determine if the relation is a function.

Computer Mathematics

COM.3 The student will design a step-by-step plan (algorithm) to solve a given problem. The plan will be in the form of a program flowchart, pseudo code, a hierarchy chart and/or data flow diagram.

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure.

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

History and Social Science

12.15 The student will analyze the United States market economy, in terms of

- labor, capital, and natural resources;
- the interaction of supply and demand in markets;
- the role of private ownership, private enterprise, and profits;
- the relationships of households, firms, and government;
- labor/management relationships; and
- relationships to the global economy.

12.17 The student will evaluate the effect of monetary and fiscal policies on personal economic well-being including employment opportunities, purchasing power, credit and interest rates, and opportunities for investment and savings.

12.18 The student will define common economic terms, including productivity, recession, depression, the business cycle, and inflation, and explain and interpret indicators of economic performance, including gross domestic product, consumer price index, unemployment rate, balance of trade, and stock market averages.

Advanced Accounting 6321
CIP Code: 52.0302
Grade Levels: 11, 12 (36 weeks)
Prerequisite: Accounting

Description: Students gain in-depth knowledge of accounting procedures and techniques used to solve business problems and make financial decisions. Students use accounting and spreadsheet software to analyze and interpret business applications.

Competencies		Measures of Achievement	
DUTY AREA 1. Using Automation to Implement Accounting Procedures			
1.1	Demonstrate competence in the structure and sequence of the accounting cycle using manual and electronic systems.	1.1	Student-completed project/simulation, rated acceptable based on instructor's guidelines
1.2	Use accounting software to process transactions and produce financial statements.	1.2	Student-completed activity, rated acceptable based on instructor's guidelines
1.3	Use spreadsheet software to generate supporting documents.	1.3	Student-completed activity, rated acceptable based on instructor's guidelines
1.4	Analyze computer-generated reports.	1.4	Student-prepared analysis, rated acceptable based on instructor's guidelines
DUTY AREA 2. Implementing Accounting Procedures for Assets, Liabilities, and Equity			
2.1	Analyze cash and accounts receivable transactions and record in appropriate journals.	2.1	Student-completed activity, rated acceptable based on instructor's guidelines
2.2	Analyze investment transactions and record in appropriate journals.	2.2	Student-completed activity, rated acceptable based on instructor's guidelines
2.3	Calculate inventories using various methods and record in appropriate journals.	2.3	Student-completed activity, rated acceptable based on instructor's guidelines
2.4	Analyze plant and intangible asset transactions and record in appropriate journals.	2.4	Student-completed activity, rated acceptable based on instructor's guidelines
2.5	Analyze current liabilities transactions and record in appropriate journals.	2.5	Student-completed activity, rated acceptable based on instructor's guidelines
2.6	Analyze long-term liabilities transactions and record in appropriate journals.	2.6	Student-completed activity, rated acceptable based on instructor's guidelines
2.7	Analyze equity transactions for various forms of business ownership and record in appropriate journals.	2.7	Student-completed activity, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
2.8	Generate financial and end-of-period statements.	2.8	Student-produced financial statements, completed with 100% accuracy
2.9	Analyze financial statements.	2.9	Student-prepared analysis (e.g., audit test, managerial decisions), rated acceptable based on instructor's guidelines
2.10	Update accounts through adjusting and closing entries.	2.10	Student-completed activity, rated acceptable based on instructor's guidelines
2.11	Analyze the concept of cash flow management.	2.11	Written or oral description, rated acceptable based on instructor's guidelines
DUTY AREA 3. Implementing Special Systems			
3.1	Implement procedures for departmental or branch accounting systems.	3.1	Student-completed activity, rated acceptable based on instructor's guidelines
3.2	Analyze and implement various methods for budgetary planning and control.	3.2	Student-completed activity, rated acceptable based on instructor's guidelines
3.3	Analyze and implement cost accounting procedures for manufacturing accounting.	3.3	Student-completed activity, rated acceptable based on instructor's guidelines
3.4	Analyze financial statements for a manufacturing concern to make cost decisions.	3.4	Student-completed activity, rated acceptable based on instructor's guidelines
DUTY AREA 4. Understanding Business Ethics			
4.1	Maintain confidentiality.	4.1	Case studies, solutions rated acceptable according to the American Institute of Certified Public Accountants' (AICPA) Professional Standards and Professional Conduct
4.2	Interpret characteristics of professional conduct.	4.2	Case studies, analyses rated acceptable according to the American Institute of Certified Public Accounts' (AICPA) Professional Standards and Professional Conduct
DUTY AREA 5. Enhancing Career Exploration and Employability Skills			
5.1	Identify the purposes and goals of the student organization.	5.1	Written or oral identification, rated acceptable according to instructor's guidelines
5.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require skills and concepts).	5.2	Student demonstration, all items rated acceptable according to instructor's guidelines

Competencies	Measures of Achievement
5.3 Examine accounting issues faced by different types of industries such as services, manufacturing, and distribution.	5.3 Student-researched report, rated acceptable according to instructor's guidelines
5.4 Update resume.	5.4 Student-produced resume, rated acceptable based on industry standards
5.5 Complete job application process.	5.5 Student-completed job application form and student-produced letter of application, all items rated acceptable according to instructor-prepared guidelines
5.6 Demonstrate successful interviewing techniques.	5.6 Student-simulated interview and follow-up, all items rated acceptable according to instructor-prepared guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.2 The student will analyze and evaluate persuasive presentations.
- Critique the accuracy, relevance, and organization of evidence.
- Critique the clarity and effectiveness of delivery.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.
- Cite sources of information using a standard method of documentation.
- Edit for correct use of language, capitalization, punctuation, and spelling in final copies.
- Use available technology.

Algebra I

A.2 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables. Students will choose an appropriate computational technique, such as mental mathematics, calculator, or paper and pencil.

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

A.5 The student will analyze a given set of data for the existence of a pattern, represent the pattern algebraically and graphically, if possible, and determine if the relation is a function.

Computer Mathematics

COM.3 The student will design a step-by-step plan (algorithm) to solve a given problem. The plan will be in the form of a program flowchart, pseudo code, a hierarchy chart and/or data flow diagram.

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure.

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

History and Social Science

12.15 The student will analyze the United States market economy, in terms of

- labor, capital, and natural resources;
- the interaction of supply and demand in markets;
- the role of private ownership, private enterprise, and profits;
- the relationships of households, firms, and government;
- labor/management relationships; and
- relationships to the global economy.

12.17 The student will evaluate the effect of monetary and fiscal policies on personal economic well-being including employment opportunities, purchasing power, credit and interest rates, and opportunities for investment and savings.

12.18 The student will define common economic terms, including productivity, recession, depression, the business cycle, and inflation, and explain and interpret indicators of economic performance, including gross domestic product, consumer price index, unemployment rate, balance of trade, and stock market averages.

Business Law 6131
CIP Code 52.0202
Grade Level: 11, 12 (18, 36 weeks)
Prerequisite: None

Description:	Students examine the foundations of the American legal system. Students explore economic and social concepts as they relate to legal principles and to business and personal laws.
Note:	This list contains competencies for a 36-week course. The list should be adjusted for courses of shorter duration.

Competencies	Measures of Achievement
DUTY AREA 1. Examining the Foundations of a Legal System	
1.1 Examine the constitutional basis for law.	1.1 Individual or group report, rated acceptable based on instructor's guidelines
1.2 Identify the need for laws.	1.2 Individual or group activity, rated acceptable based on instructor's guidelines
1.3 Differentiate between criminal and civil trial procedures.	1.3 Student-directed mock trial(s), all items on an instructor-prepared checklist rated acceptable by students and teacher
1.4 Describe administrative, judicial, and legislative branches of the legal system.	1.4 Individual or group activity, rated acceptable based on school system standards
1.5 Compare federal, state, and local court systems and show their relationship.	1.5 Written and oral report, rated acceptable based on instructor's guidelines
1.6 Explain the characteristics of case, statutory, administrative, and legislative laws.	1.6 Written test, rated acceptable based on school system standards
1.7 Contrast ethics, morals, and laws.	1.7 Problem-solving of case studies, solutions supported by identification of legal principles and other instructor-specified criteria
1.8 Identify the rights and responsibilities of citizens and non-citizens.	1.8 Individual or group activity, rated acceptable based on school system standards
1.9 Identify the rights and responsibilities of certain populations (e.g., the insane, the incarcerated).	1.9 Written report, rated acceptable based on instructor-specified criteria
1.10 Identify the rights and responsibilities of minors.	1.10 Individual- or group-researched report, rated acceptable based on instructor's guidelines

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Competencies	Measures of Achievement
DUTY AREA 2. Identifying Contracts	
2.1 Identify essential elements of a contract.	2.1 Student-developed contract, all items on instructor-prepared checklist rated acceptable
2.2 Identify types of consideration necessary for a valid contract.	2.2 Written test, rated acceptable based on school system standards
2.3 Identify types of contracts.	2.3 Individual or group presentation, rated acceptable based on school system standards
2.4 Interpret effects of a contract on a minor.	2.4 Case studies, all items rated acceptable based on rule of law
2.5 Explain effects of a breach of contract.	2.5 Written test, rated acceptable based on school system standards
2.6 Explain the importance of a contract in today's society.	2.6 Individual or group activity, rated acceptable based on school system standards
DUTY AREA 3. Examining Rights and Responsibilities of Consumers	
3.1 Determine agencies that provide consumer protection information.	3.1 Written or oral report, rated acceptable according to instructor-provided guidelines
3.2 Identify laws that afford consumer protection.	3.2 Written report, rated acceptable according to instructor-provided guidelines
3.3 Identify the reasons for bankruptcy laws.	3.3 Written test, rated acceptable according to school system standards
3.4 Evaluate the functions of different types of insurance (life, medical, automobile).	3.4 Written or oral report, rated acceptable based on criteria specified by instructor
3.5 Explain components of estate planning (power of attorney, wills, trusts, living wills, right to die, etc.).	3.5 Estate-planning documents designed by small groups, rated acceptable based on instructor-prepared rating form
3.6 Identify a negotiable instrument (commercial paper, checks, certificates of deposit, etc.).	3.6 Written test, rated acceptable based on school system standards
3.7 Describe characteristics of a bailment.	3.7 Written test, rated acceptable based on school system standards
3.8 Describe responsibilities of parties involved in bailment.	3.8 Written test, rated acceptable based on school system standards
3.9 Distinguish between real and personal property.	3.9 Written or oral report, rated acceptable based on school system standards

Competencies	Measures of Achievement
3.10 Describe legal aspects of a real estate transaction.	3.10 Written test, rated acceptable based on school system standards
3.11 Compare rights and responsibilities of landlords and tenants.	3.11 Case studies, rated acceptable based on rule of law
DUTY AREA 4. Exploring Criminal Law	
4.1 Distinguish between civil law and criminal law.	4.1 Case studies evaluated by small groups, student participation and evaluation rated as acceptable based on instructor-prepared rating form
4.2 Differentiate between juvenile justice system and adult system.	4.2 Written test, rated acceptable based on school system standards
4.3 Identify common crimes.	4.3 Student-collected newspaper articles classified by type of crime, rated acceptable based on instructor's guidelines
4.4 Distinguish between a misdemeanor and a felony.	4.4 Student-collected newspaper articles, labeled as describing misdemeanor or felony, rated acceptable based on instructor's guidelines
4.5 Contrast penalities associated with misdemeanors and felonies.	4.5 Written test, rated acceptable based on school system standards
4.6 Explain crimes associated with business (e.g., embezzlement, extortion).	4.6 Written and oral report, rated acceptable based on instructor's guidelines
4.7 Describe the purpose of the Statute of Frauds.	4.7 Written test, rated acceptable based on school system standards
DUTY AREA 5. Exploring Tort Law	
5.1 Describe common torts.	5.1 Individual or group activity, rated acceptable based on school system standards
5.2 Differentiate between assault and battery.	5.2 Role-play or case study activities, student participation/response evaluated as acceptable based on instuctor-prepared rating form
5.3 Distinguish between slander and libel.	5.3 Role-play or case study activities, student participation/response evaluated as acceptable based on instructor-prepared rating form
5.4 Explain penalties associated with torts.	5.4 Written test, rated acceptable based on school system standards

Competencies	Measures of Achievement
5.5 Distinguish between crimes and torts.	5.5 Role-play or case study activities, student participation/response evaluated as acceptable based on instuctor-prepared rating form
DUTY AREA 6. Utilizing Sources of Legal Assistance	
6.1 Identify need for legal assistance.	6.1 Case studies, rated acceptable according to instructor's guidelines
6.2 Determine sources for legal advice.	6.2 Student-developed local directory for legal assistance, all items must meet criteria specified on instructor-provided checksheet
6.3 Identify the criteria for selecting an attorney.	6.3 Written report, rated acceptable based on school system standards
6.4 Develop a plan for securing appropriate legal assistance.	6.4 Student-produced plan, rated acceptable based on instructor's guidelines
6.5 Identify sources of legal information (e.g., *Code of Virginia*).	6.5 Student-researched list of sources, rated acceptable according to instructor-prepared checklist
DUTY AREA 7. Identifying Concepts in International Law	
7.1 Compare the American legal system with systems in other countries.	7.1 Written and oral reports on selected topics, rated acceptable based on instructor's guidelines
7.2 Describe the impact of foreign and international laws on our economy.	7.2 Oral report, rated acceptable according to instructor's guidelines
7.3 Describe citizens' rights when traveling or living abroad.	7.3 Written and oral reports, rated acceptable according to instructor's guidelines
DUTY AREA 8. Examining Legal Aspects of Employment	
8.1 Describe rights and responsibilities of employees and employers.	8.1 Individual or group activity, rated acceptable based on school system standards
8.2 Explain the rights and responsibilities of parties to an employment contract.	8.2 Case studies, rated acceptable based on instructor-prepared rating form
8.3 Identify federal, state, and local laws and agencies dealing with employment.	8.3 Written test, rated acceptable based on school system standards
8.4 Describe ways working adults and minors are protected by the law.	8.4 Individual or group activity, rated acceptable based on instructor's guidelines

Competencies	Measures of Achievement
8.5 Examine legal basis for workplace ethics.	8.5 Case studies, rated acceptable if solutions are supported by legal procedures and other criteria identified by instructor
8.6 Identify agency rights and responsibilities.	8.6 Written test, rated acceptable based on school system standards
8.7 Identify the purposes of grievances and procedures for filing them.	8.7 Case studies, rated acceptable based on instructor's guidelines
8.8 Identify legal basis for termination.	8.8 Case studies, rated acceptable based on instructor's guidelines
DUTY AREA 9. Exploring Business Law Careers	
9.1 Identify the purposes and goals of the student organization.	9.1 Written or oral identification, rated acceptable according to instructor's guidelines
9.2 Participate in course activities sponsored by the student organization (e.g., meetings, programs).	9.2 Student demonstration, all items rated acceptable according to instructor's guidelines
9.3 Identify career opportunities in the legal profession.	9.3 Written or oral identification, rated acceptable according to instructor's guidelines
9.4 Describe the employment outlook in the legal profession.	9.4 Written report, rated acceptable based on instructor-provided guidelines
9.5 Compose a letter of application.	9.5 Student-produced letter, rated acceptable based on industry standards
9.6 Create or update a resume.	9.6 Student-produced resume, rated acceptable based on industry standards
9.7 Complete an application.	9.7 Student-completed application, rated acceptable based on industry standards
9.8 Demonstrate interview techniques.	9.8 Role-play activity, rated acceptable based on industry standards
9.9 Compose an interview follow-up letter.	9.9 Student-produced letter, rated acceptable based on industry standards
9.10 Apply for a position.	9.10 Student-produced document, rated acceptable based on industry standards
9.11 Identify the steps to follow in resigning from a position.	9.11 Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.2 The student will analyze and evaluate persuasive presentations.
- Critique the accuracy, relevance, and organization of evidence.
- Critique the clarity and effectiveness of delivery.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.
- Cite sources of information using a standard method of documentation.
- Edit for correct use of language, capitalization, punctuation, and spelling in final copies.
- Use available technology.

Computer Mathematics

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

History and Social Science

11.4 The student will analyze the events and ideas of the Constitutional Era, with emphasis on
- new constitutions in Virginia and other states, the Virginia Statute of Religious Freedom, the Virginia Declaration of Rights, and the Articles of Confederation;
- issues and policies affecting relations among existing and future states, including the Northwest Ordinance;
- the Constitutional Convention, including the leadership of James Madison and George Washington;
- the struggle for ratification of the Constitution, including the Federalist Papers and the arguments of the Anti-Federalists; and
- the addition of the Bill of Rights to the Constitution.

11.5 The student will analyze and explain events of the Early National Period, with emphasis on
- organization of the national government under the new Constitution;
- major domestic and foreign affairs issues facing the first presidents and Congress;
- the development of political parties;

- the impact of Supreme Court decisions affecting interpretation of the Constitution, including *Marbury v. Madison* and *McCulloch v. Maryland;*
- foreign relations and conflicts, including the War of 1812 and the Monroe Doctrine;
- the Louisiana Purchase and the acquisition of Florida; and
- economic development, trade, tariffs, taxation, and trends in the national debt.

11.13 The students will evaluate federal civil rights and voting rights developments since the 1950's, in terms of

- the *Brown v. Board of Education* decision and its impact on education;
- civil rights demonstrations and related activity leading to desegregation of public accommodations, transportation, housing, and employment;
- reapportionment cases and voting rights legislation and their impact on political participation and representation; and
- affirmative action.

11.14 The student will demonstrate an understanding of domestic policy issues in contemporary American society by

- comparing conservative and liberal economic strategies;
- explaining current patterns of Supreme Court decisions and evaluating their impact; and
- comparing the positions of the political parties and interest groups on major issues.

11.17 The student will develop skills for historical analysis, including the ability to

- analyze documents, records, and data (such as artifacts, diaries, letters, photographs, journals, newspapers, historical accounts, etc.);
- evaluate the authenticity, authority, and credibility of sources;
- formulate historical questions and defend findings based on inquiry and interpretation;
- develop perspectives of time and place, including the construction of various time lines of events, periods, and personalities in American history; and
- communicate findings orally, in brief analytical essays, and in a comprehensive paper.

11.18 The student will develop skills in discussion, debate, and persuasive writing with respect to enduring issues and determine how divergent viewpoints have been addressed and reconciled. Such issues include

- civil disobedience vs. the rule of law;
- slavery and its impact;
- the relationship of government to the individual in economic planning and social programs;
- freedom of the press vs. the right to a fair trial;
- the tension between majority rule and minority rights;
- problems of intolerance toward racial, ethnic, and religious groups in American society; and
- the evolution of rights, freedoms, and protection through political and social movements.

Grade 12

12.2 The student will identify examples of fundamental American political principles contained in the Virginia Constitution, the Declaration of Independence, the United States Constitution, and the Federalist Papers, and will compare them to principles of government and law developed by leading European political thinkers such as Locke, Hobbes, Montesquieu, Rousseau, and Blackstone.

12.3 The student will analyze the amendments to the United States Constitution in terms of the conflicts they addressed and the reasons for their adoption.

12.4 The student will summarize landmark Supreme Court interpretations of the United States Constitution and its amendments, with emphasis on basic freedoms, due process, equal protection of the law, and government powers, and will analyze the historical trends and contemporary patterns of United States Supreme Court decisions.

12.5 The student will identify and explain fundamental concepts of democracy, with emphasis placed on equality of all citizens under the law, the fundamental worth and dignity of the individual, majority rule and minority rights, the necessity of compromise, individual freedom, and the rule of law.

12.6 The student will analyze in writing, and debate current issues confronting local, state, and national governments in terms of perennial challenges to democracies, including conflicts between
- majority rule and minority rights;
- individual rights and the public interest;
- levels of taxation and the expectation of public services; and
- state and national authority in a federal system.

12.7 The student will analyze and compare national and state governments, with emphasis on
- the structures, functions, and authority of each;
- the principles of federalism, separation of powers, and checks and balances;
- the extent to which powers is shared rather than divided or separated; and
- procedures for constitutional amendment.

12.8 The student will explain how United States and Virginia legislative, executive, and judicial institutions make public policy, in terms of
- legislation, regulations, executive orders, and judicial review;
- constitutional requirements and institutional procedures; and
- specific policies related to foreign affairs, civil rights, and economics and the budget.

12.9 The student will identify and distinguish among the units of local governments in Virginia, including counties, cities, towns, and regional authorities and will analyze a local public issue.

12.12 The student will explain the rights, responsibilities, and benefits of citizenship in the United States and Virginia.

12.13 The student will develop the skills needed for informed participation in public affairs by
- analyzing public issues;
- evaluating candidates for public office;
- evaluating the performance of public officials; and
- communicating with public officials.

12.15 The student will analyze the United States market economy, in terms of
- labor, capital, and natural resources;
- the interaction of supply and demand in markets;
- the role of private ownership, private enterprise, and profits;
- the relationships of households, firms, and government;
- labor/management relationships; and
- relationships to the global economy.

12.16 The student will analyze the role of government in the United States economy, with emphasis on
- monetary and fiscal policies;
- interstate commerce and international trade policies;
- providing favorable conditions for markets;
- providing public goods and services;
- protecting the environment; and
- promoting economic growth.

12.18 The student will define common economic terms, including productivity, recession, depression, the business cycle, and inflation, and explain and interpret indicators of economic performance, including gross domestic product, consumer price index, unemployment rate, balance of trade, and stock market averages.

Business Management 6135
CIP Code: 52.0201
Grade Levels: 11, 12 (18, 36 weeks)
Prerequisite: None

Description:	Students study basic management concepts and leadership styles as they explore business functions, economics, international business, and human relations issues such as employee motivation and conflict resolution. Student leadership skills may be enhanced by internship experiences.
Note:	This list contains competencies for a 36-week course. The list should be adjusted for courses of shorter duration.

Competencies		Measures of Achievement	
DUTY AREA 1. Exploring the Characteristics of Business			
1.1	Explore advantages and disadvantages of different types of business ownership and organization.	1.1	Student-prepared chart, rated acceptable based on criteria specified in instructor's guidelines
1.2	Explain the role and nature of entrepreneurship.	1.2	Written or oral report, rated acceptable based on criteria specified in instructor's guidelines
1.3	Identify opportunities, problems, and obligations of small businesses.	1.3	Written or oral report, rated acceptable based on criteria specified in instructor's guidelines
1.4	Explain the changing nature of business.	1.4	Student-completed activity, rated acceptable based on instructor's guidelines
1.5	Investigate current trends in business.	1.5	Written evaluation of panel discussion, rated acceptable on instructor-prepared rating form
1.6	Predict how changes in society and business will impact on employment in the future.	1.6	Student-completed activity, rated acceptable based on instructor's guidelines
1.7	Describe the changing nature of the population, the labor force, and some of the major social issues that impact businesses today.	1.7	Written or oral report, all items on instructor-prepared rating form rated acceptable
1.8	Identify current laws and regulations affecting the establishment and operation of businesses.	1.8	Student-completed activity, all items on instructor-prepared checklist rated acceptable
1.9	Explain how international business impacts on balance of trade and on importing and exporting operations.	1.9	Student-completed activity, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
1.10	Describe how global competition has affected how American businesses operate.	1.10	Individual or small group presentation, rated acceptable on instructor-prepared rating sheet
1.11	Analyze the effects of international business on office functions and personnel.	1.11	Student-produced analysis, average or above rating
DUTY AREA 2. Exploring Economic Factors Affecting Business			
2.1	Describe economic concepts that apply to satisfying economic wants.	2.1	Student-completed activity, rated acceptable based on instructor's guidelines
2.2	Identify economic systems and economic-political systems.	2.2	Instructor-prepared test, average or above rating
2.3	Explain the fundamental elements of capitalism and their application to American society.	2.3	Student-completed activity, rated acceptable based on instructor's guidelines
2.4	Explain how economic growth can be promoted and measured.	2.4	Student-completed activity, rated acceptable based on instructor's guidelines
2.5	Analyze basic economic problems.	2.5	Case study, rated acceptable based on instructor's guidelines
2.6	Contrast the American free enterprise system with other economic systems, in terms of origin, societal impacts, and long-range prospects.	2.6	Written research report, average or above rating
DUTY AREA 3. Identifying Management Responsibilities			
3.1	Describe the management functions.	3.1	Instructor-prepared test, average or above rating
3.2	Identify benefits and limitations of a variety of management styles.	3.2	Student-completed worksheet, average or above rating based on instructor's guidelines
3.3	Compare various leadership styles.	3.3	Individual or group report, rated acceptable on instructor-prepared evaluation form
3.4	Distinguish between management and leadership skills.	3.4	Case studies, rated acceptable on instructor-prepared rating form
3.5	Develop a personal philosophy of management.	3.5	Written report and oral presentation, rated acceptable based on criteria specified in instructor's guidelines
3.6	Develop and communicate a vision and a mission statement.	3.6	Written statement, rated acceptable based on criteria specified in instructor's guidelines

Competencies		Measures of Achievement	
3.7	Describe planning tools used by managers.	3.7	Student-completed activity, rated acceptable based on criteria in instructor's guidelines
3.8	Develop an action plan that states goals, strategies, and objectives.	3.8	Student-produced plan, all items on instructor-prepared checklist rated acceptable
3.9	Organize business activities.	3.9	Simulated activity, rated acceptable based on criteria in instructor's guidelines
3.10	Present ways for managers to implement the work of organizations.	3.10	Case studies, rated acceptable based on criteria in instructor's guidelines
3.11	Investigate methods of implementing quality control measures.	3.11	Critique of guest speaker's presentation, rated acceptable based on criteria specified in instructor's guidelines
DUTY AREA 4. Conducting Financial Activities			
4.1	Explore sources of capital.	4.1	Instructor-prepared test, average rating
4.2	Identify factors contributing to the cost of office operations.	4.2	Student-generated list, average or above rating
4.3	Analyze sales/production records.	4.3	Written report, rated acceptable based on criteria in instructor's guidelines
4.4	Determine status of jobs pending, in progress, and completed.	4.4	Simulated production board, rated acceptable based on criteria in instructor's guidelines
4.5	Approve financial disbursements.	4.5	Financial statements, math computations rated at 100% accuracy
4.6	Analyze inventory records.	4.6	Written or oral analysis, rated acceptable on instructor-prepared rating form
4.7	Analyze the need for preventive maintenance and for repair of equipment.	4.7	Case studies, instructor-prepared worksheet, average or above rating
4.8	Describe the significance of insurance to businesses, common types of policies, and how non-insurable risks can be reduced.	4.8	Instructor-prepared test, average or above rating
4.9	Select insurance coverage.	4.9	Worksheet to accompany presentation by guest speaker, rated acceptable based on criteria in instructor's guidelines
4.10	Design a budget.	4.10	Completed budget (using spreadsheet software when available), rated acceptable based on instructor checklist
4.11	Develop a records management system.	4.11	Simulated activity, average or above rating based on instructor's guidelines

Competencies		Measures of Achievement	
4.12	Describe credit plans, credit cards, credit policies, collection procedures, and credit analysis.	4.12	Individual or small group presentation, rated acceptable on instructor-prepared evaluation form
4.13	Identify reasons for taxes, types of taxes, and the effects taxes have on business decisions.	4.13	Instructor-prepared test, average or above rating
DUTY AREA 5. Conducting Marketing Activities			
5.1	Analyze the importance of marketing and its role in the economy.	5.1	Written or oral report rated acceptable based on criteria in instructor's guidelines
5.2	Analyze marketing concepts and the elements of the marketing mix.	5.2	Instructor-prepared test, average or above rating
5.3	Explain the four stages of the product life cycle.	5.3	Written or oral report, rated acceptable based on criteria in instructor's guidelines
5.4	Identify the consumer goods classification.	5.4	Simulated activity, rated acceptable based on criteria in instructor's guidelines
5.5	Select product/service distribution channels.	5.5	Student-completed activity, rated acceptable based on criteria in instructor's guidelines
5.6	Evaluate a purchasing system.	5.6	Simulated activity, rated acceptable based criteria in instructor's guidelines
5.7	Apply pricing procedures.	5.7	Student-completed activity, rated acceptable based on criteria in instructor's guidelines
5.8	Select an advertising program.	5.8	Simulated activity, rated acceptable based on instructor's guidelines
DUTY AREA 6. Supervising Employees			
6.1	Analyze the impact of changing technology on office functions and personnel.	6.1	Newspaper and magazine article summaries/critiques, rated acceptable based on criteria specified in instructor's guidelines
6.2	Develop a recycling program or plan.	6.2	Written plan, all elements rated acceptable according to instructor's checklist
6.3	Plan meeting.	6.3	Written agenda, all items rated acceptable according to instructor's checklist
6.4	Arrange for safety and security measures.	6.4	Written diagram, all features rated acceptable according to instructor's checklist
6.5	Develop policy and procedure manual.	6.5	Job design manual, rated acceptable according to instructor's checklist

Competencies		Measures of Achievement	
6.6	Construct organizational charts.	6.6	Student-constructed charts, rated acceptable according to instructor's guidelines
6.7	Explain staff interrelationships using a variety of organizational models.	6.7	Instructor-prepared test, average or above rating
6.8	Organize work teams.	6.8	Role-play activity, student participation evaluated as acceptable on instructor-prepared rating form
6.9	Establish work priorities, deliverables, and timelines (for both work teams and departmental units).	6.9	Instructor-prepared worksheet, average or above rating based on instructor's criteria
6.10	Coordinate employee work schedules and workload distribution.	6.10	Student-prepared work schedule and assignments, rated as acceptable based on instructor's guidelines
6.11	Apply management functions to production.	6.11	Simulated activity, rated acceptable based on criteria in instructor's guidelines
6.12	Plan physical layout, furnishings, and equipment for an office.	6.12	Student-prepared diagram (with/without CAD), all items rated acceptable on instructor's checklist
6.13	Develop an information processing system.	6.13	Student-developed system, rated acceptable based on criteria in instructor's guidelines
DUTY AREA 7. Administering Human Resources Functions			
7.1	Develop a staffing plan.	7.1	Written plan, rated acceptable based on criteria in instructor's guidelines
7.2	Establish a file of job openings.	7.2	Student-prepared list, rated acceptable based on criteria in instructor's guidelines
7.3	Develop a job description.	7.3	Student-produced description, rated acceptable based on criteria in instructor's guidelines
7.4	Publicize job description.	7.4	Student-prepared advertisement, rated acceptable based on criteria in instructor's guidelines
7.5	Identify traits associated with sensitivity to a diverse workforce.	7.5	Case studies, rated acceptable based on criteria in instructor's guidelines
7.6	Administer assessment tools that address work and personality styles and types.	7.6	Case studies, rated acceptable based on criteria in instructor's guidelines
7.7	Outline the procedures used in employee selection, promotion, and termination.	7.7	Student-prepared outline, rated acceptable based on criteria in instructor's guidelines

	Competencies		Measures of Achievement
7.8	Interview applicant for employment using the committee approach.	7.8	Role-play activity, rated acceptable on student/teacher evaluation
7.9	Orient a new employee.	7.9	Role-play activity, rated acceptable based on student/instructor evaluation
7.10	Monitor employee or team progress.	7.10	Student group-prepared checklist, rated acceptable based on student/instructor evaluation
7.11	Design an appraisal system (based on an investigation of a variety of job descriptions and appraisal systems).	7.11	Instructor-prepared test, average or above rating
7.12	Outline the process for employee dismissal (reasons for determination, due process, etc.).	7.12	Student-prepared outline, rated acceptable based on industry standards
7.13	Explain needs, concerns, and procedures for outsourcing and for hiring temporary employees.	7.13	Case studies, rated acceptable based on criteria in instructor's guidelines
7.14	Identify elements of federal legislation pertinent to staffing (e.g., Americans with Disabilities Act).	7.14	Instructor-prepared test, average or above rating
7.15	Interpret legal issues (e.g., harassment, employee rights, privacy, drug testing, discrimination, and substance abuse) from the supervisor's point of view.	7.15	Written analysis of current articles, rated acceptable based on instructor's guidelines
7.16	Identify a benefits package (including education and health/family care programs, for example).	7.16	Simulated activity, rated acceptable based on instructor's checklist
7.17	Select employee training programs.	7.17	Instructor-designed test, average or above rating
7.18	Design an employee training model.	7.18	Individual or group project, rated acceptable based on criteria in instructor's guidelines
7.19	Explain the purpose and characteristics of a career development program.	7.19	Written or oral report, rated acceptable based on criteria in instructor's guidelines
7.20	Develop techniques for introducing and implementing changes (to include changes in staffing, equipment, and procedures).	7.20	Role-play activity, rated acceptable based on criteria in instructor's guidelines
7.21	Identify possible solutions to labor problems.	7.21	Case studies, rated acceptable based on industry standards
	DUTY AREA 8. Developing Communication Skills for Business		
8.1	Communicate individually with staff and clients.	8.1	Role-play activity, student participation evaluated as acceptable on instructor-prepared rating form

Competencies		Measures of Achievement	
8.2	Identify ways to improve communication in organizations.	8.2	Student-completed activity, rated acceptable based on instructor's guidelines
8.3	Identify communication barriers.	8.3	Student-completed worksheet, rated average or above based on instructor's stated criteria
8.4	Establish lines of communication within the unit (e.g., verbal and non-verbal communications, effective listening skills, and technological communications).	8.4	Office simulation (using e-mail where available), rated acceptable according to criteria in instructor's checklist
8.5	Explain how corporate culture influences formal and informal communication networks as well as work teams.	8.5	Student-completed activity, rated acceptable based on instructor's guidelines
8.6	Explain the types of communication problems that can occur when conducting business in foreign countries.	8.6	Case studies, rated acceptable based on criteria in instructor's guidelines
8.7	Identify ways to motivate, coach, counsel, and reward individuals and team.	8.7	Instructor-prepared test, average or above
8.8	Resolve conflicts.	8.8	Role-play activity, rated acceptable based on criteria in instructor's guidelines rating
8.9	Explain the basic principles of work and business ethics.	8.9	Case studies, rated acceptable based on criteria in instructor's guidelines
8.10	Develop facilitator techniques.	8.10	Simulation, rated acceptable on student/instructor evaluation
8.11	Deliver a written and oral presentation to an audience outside the unit.	8.11	Written/oral presentation, rated acceptable based on agency standards
8.12	Conduct meetings.	8.12	Role-play activity, rated acceptable on student/instructor evaluation
8.13	Develop liaisons with other organizations, with the community, and within the organization (to include communication through telecommunications systems).	8.13	Student participation in community service organization, rated acceptable according to organization evaluation
8.14	Identify the benefits of community involvement within the organization.	8.14	Critique of presentation by community speaker, rated acceptable based on criteria in instructor's guidelines
DUTY AREA 9. Preparing for Employment			
9.1	Identify the purposes and goals of the student organization.	9.1	Written or oral identification, rated acceptable according to instructor's guidelines

Competencies		Measures of Achievement	
9.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	9.2	Student demonstration, all items rated acceptable according to instructor's guidelines
9.3	Identify career opportunities in business management.	9.3	Written or oral report, rated acceptable on instructor's guidelines
9.4	Update resume.	9.4	Student-produced hard copy, rated acceptable based on industry standards
9.5	Create letter of application.	9.5	Student-produced hard copy, rated acceptable based on industry standards
9.6	Participate in mock interview.	9.6	Role-play activity, rated acceptable based on industry standards
9.7	Apply for promotion.	9.7	Student-produced document, rated acceptable according to instructor's guidelines
9.8	Identify the steps to follow in resigning from a position.	9.8	Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.2 The student will analyze and evaluate persuasive presentations.
- Critique the accuracy, relevance, and organization of evidence.
- Critique the clarity and effectiveness of delivery.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.
- Cite sources of information using a standard method of documentation.
- Edit for correct use of language, capitalization, punctuation, and spelling in final copies.
- Use available technology.

Algebra I

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.8 The student will design and implement computer graphics, which will include topics appropriate for the available programming environment as well as student background. Students will use graphics as an end in itself, as an enhancement to other output, and as a vehicle for reinforcing programming techniques.

COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure.

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

History and Social Science

Grade 11

11.12 The student will analyze and explain United States foreign policy since World War II, with emphasis on

- the origins and both foreign and domestic consequences of the Cold War;
- communist containment policies in Europe, Latin America, and Asia;
- the strategic and economic factors in Middle East policy;
- relations with South Africa and other African nations;
- the collapse of communism and the end of the Cold War; and
- new challenges to America's leadership role in the world.

11.14 The student will demonstrate an understanding of domestic policy issues in contemporary American society by

- comparing conservation and liberal economic strategies;
- explaining current patterns of Supreme Court decisions and evaluating their impact; and
- comparing the positions of the political parties and interest groups on major issues.

11.18 The student will develop skills in discussion, debate, and persuasive writing with respect to enduring issues and determine how divergent viewpoints have been addressed and reconciled. Such issues include

- civil disobedience vs. the rule of law;
- slavery and its impact;
- the relationship of government to the individual in economic planning and social programs;
- freedom of the press vs. the right to a fair trial;
- the tension between majority rule and minority rights;
- problems of intolerance toward racial, ethnic, and religious groups in American society; and
- the evolution of rights, freedoms, and protection through political and social movements.

Grade 12

12.5 The student will identify and explain fundamental concepts of democracy, with emphasis placed on equality of all citizens under the law, the fundamental worth and dignity of the individual, majority rule and minority rights, the necessity of compromise, individual freedom, and the rule of law.

12.6 The student will analyze in writing, discussion, and debate current issues confronting local, state, and national governments in terms of perennial challenges to democracies, including conflicts between

- majority rule and minority rights;
- individual rights and the public interest;
- levels of taxation and the expectation of public services; and
- state and national authority in a federal system.

12.7 The student will analyze and compare national and state governments, with emphasis on

- the structures, functions, and authority of each;
- the principles of federalism, separation of powers, and checks and balances;
- the extent to which power is shared rather than divided or separated; and
- procedures for constitutional amendment.

12.8 The student will explain how United States and Virginia legislative, executive, and judicial institutions make public policy, in terms of

- legislation, regulations, executive orders, and judicial review;

- constitutional requirements and institutional procedures; and
- specific policies related to foreign affairs, civil rights, and economics and the budget.

12.10 The student will explain and give current examples of how political parties, interest groups, the media, and individuals influence the policy agenda and decision making of government institutions.

12.14 The student will compare the United States political and economic systems with those of major democratic and authoritarian nations, in terms of

- the structures and powers of political institutions;
- the rights and powers of the governed including grass roots citizen movements;
- economic goals and institutions and the role of government in the economy;
- the relationships between economic freedom and political freedom; and
- the allocation of resources and its impact on productivity.

12.15 The student will analyze the United States market economy, in terms of

- labor, capital, and natural resources;
- the interaction of supply and demand in markets;
- the role of private ownership, private enterprise, and profits;
- the relationships of households, firms, and government;
- labor/management relationships; and
- relationships to the global economy.

12.16 The student will analyze the role of government in the United States economy, with emphasis on

- monetary and fiscal policies;
- interstate commerce and international trade policies;
- providing favorable conditions for markets;
- providing public goods and services;
- protecting the environment; and
- promoting economic growth.

12.18 The student will define common economic terms, including productivity, recession, depression, the business cycle, and inflation, and explain and interpret indicators of economic performance, including gross domestic product, consumer price index, unemployment rate, balance of trade, and stock market averages.

Computer Information Systems 6612
CIP Code: 52.1201
Grade Levels 10, 11, 12 (18, 36 weeks)
Prerequisite: Keyboarding Applications*
*Keyboarding courses or teacher-approved demonstrated touch keyboarding skills

Description: Students apply problem-solving skills to real-life situations through word processing, spreadsheet, and database software, and through integrated software activities. Students work individually and in groups to explore computer concepts, operating systems, and emerging technologies.

Note: This list contains competencies for a 36-week course. The list should be adjusted for courses of shorter duration.

Competencies		Measures of Achievement	
DUTY AREA 1. Exploring Computer Concepts			
1.1	Identify parts of the computer.	1.1	Student demonstration, rated acceptable based on instructor-prepared checklist
1.2	Describe the information processing cycle.	1.2	Instructor-prepared test, average or above rating
1.3	Trace the development of computers and their impact on society.	1.3	Written and/or oral report, rated acceptable based on instructor's guidelines
1.4	Compare the purposes of computer input devices.	1.4	Instructor-prepared test, average or above rating
1.5	Explain functions of the central processing unit.	1.5	Instructor-prepared test, average or above rating
1.6	Compare the purposes of computer output devices.	1.6	Instructor-prepared test, average or above rating
1.7	Compare the purposes of auxiliary storage devices.	1.7	Instructor-prepared test, average or above rating
1.8	Identify basic networking components.	1.8	Student demonstration, rated acceptable based on instructor-prepared checklist
DUTY AREA 2. Maintaining Equipment			
2.1	Maintain work station, equipment, materials, and supplies.	2.1	Student demonstration, rated acceptable based on instructor-prepared rating form
2.2	Obtain assistance via electronic and hard-copy references and documentation.	2.2	Student demonstration, rated acceptable based on instructor-prepared rating form

Competencies		Measures of Achievement	
2.3	Troubleshoot hardware problems (e.g., proper connections, power supply, switch box connections, printer jams).	2.3	Student demonstration, rated acceptable based on instructor-prepared checklist
2.4	Use Macintosh, DOS, and/or Windows system operations.	2.4	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
2.5	Manage files and directories (networked and stand-alone environments).	2.5	Student-produced screen or printed copy of directory, rated acceptable based on instructor's checklist
2.6	Backup/restore programs and data files.	2.6	Student-produced screen or printed copy of directory, rated acceptable based on instructor's checklist
2.7	Clean disks when virus detected.	2.7	Student demonstration, virus removed according to software capabilities
DUTY AREA 3. Producing Word Processing Documents			
3.1	Create letters, memoranda, and reports.	3.1	Student-produced hard copy of directories and documents, rated acceptable based on industry standards
3.2	Edit documents.	3.2	Student-produced hard copies of original and edited material, rated acceptable based on instructor's checklist
3.3	Enhance layout of documents by using formatting features (e.g., bold, underline, indentation, margins, etc.).	3.3	Student-produced copy, rated acceptable based on instructor's checklist
3.4	Analyze writing tool suggestions (e.g., Speller, Thesaurus, Grammar Check).	3.4	Student-completed copy, rated acceptable based on content of data analyzed
DUTY AREA 4. Developing Electronic Spreadsheets			
4.1	Create spreadsheet.	4.1	Student-completed copy, rated acceptable based on content of data analyzed
4.2	Edit spreadsheet.	4.2	Student-produced hard copies of original and edited file, rated acceptable based on instructor's checklist
4.3	Enhance spreadsheet by using formatting features (e.g., column width, justification, values).	4.3	Student-produced copy, rated acceptable based on instructor's checklist
4.4	Devise arithmetic formulas to solve typical business problems.	4.4	Student-completed worksheet, formulas developed with 100% accuracy
4.5	Use relative and absolute cell addressing.	4.5	Student-produced document showing formulas, rated acceptable based on instructor's checklist

Competencies		Measures of Achievement	
4.6	Incorporate functions into spreadsheet.	4.6	Student-produced document showing functions, rated acceptable based on instructor's checklist
4.7	Create and print graphs and charts.	4.7	Student-produced hard copy, rated acceptable based on instructor's checklist
DUTY AREA 5. Developing and Managing Databases			
5.1	Distinguish among database structures.	5.1	Student-completed worksheet, average or above rating
5.2	Design on paper and create a database file.	5.2	Student-produced screen and hard copy, rated acceptable based on industry standards
5.3	Edit database file.	5.3	Student-produced hard copies of original and edited file, rated acceptable based on instructor's checklist
5.4	Create queries listing designated fields.	5.4	Student-produced copy, average or above rating
5.5	Generate report.	5.5	Student-produced copy, rated acceptable by instructor based on software capabilities
5.6	Integrate a variety of software applications.	5.6	Student-produced copy, all items rated acceptable on instructor's checklist
DUTY AREA 6. Examining the Impact of New and Emerging Technologies			
6.1	Suggest potential uses of virtual reality in business applications.	6.1	Group presentation, student participation rated acceptable based on instructor's guidelines
6.2	Explore trends in emerging communications technology and information processing.	6.2	Written and/or oral report, rated acceptable based on instructor's guidelines
6.3	Explore the impact on business of large-scale integration of components, increased capacity and cost-effectiveness of electronic storage, and other such developments.	6.3	Written and/or oral report, rated acceptable based on instructor's guidelines
DUTY AREA 7. Introducing Telecommunication Activities			
7.1	Identify components of telecommunication devices (e.g., modems, x-modems, answering machines, voice mail, fax machines).	7.1	Instructor-prepared test, rated average or above
7.2	Communicate via fax, voice mail, e-mail, and electronic bulletin board (networked and stand-alone environments).	7.2	Student demonstration and hard copy, rated acceptable based on instructor-generated checklist

Competencies		Measures of Achievement	
DUTY AREA 8. Preparing for Employment			
8.1	Identify the purposes and goals of the student organization.	8.1	Written or oral identification, rated acceptable according to instructor's guidelines
8.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	8.2	Student demonstration, all items rated acceptable according to instructor's guidelines
8.3	Explore careers in computer fields.	8.3	Written and/or oral report, rated acceptable based on instructor's guidelines
8.4	Update resume.	8.4	Student-produced hard copy, rated acceptable based on industry standards
8.5	Create letter of application and application form.	8.5	Student-produced hard copy, rated acceptable based on industry standards
8.6	Create a portfolio containing representative samples of each type of document produced in course.	8.6	Student-produced folders, rated acceptable based on instructor's checklist
8.7	Participate in mock interview.	8.7	Role-playing activity, rated acceptable based on instructor's rating form
8.8	Create follow-up letter.	8.8	Student-produced hard copy, rated acceptable based on industry standards
8.9	Apply for promotion.	8.9	Student-produced document, rated acceptable according to industry standard
8.10	Identify the steps to follow in resigning from a position.	8.10	Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.2 The student will critique oral reports of small-group learning activities.
- Evaluate one's own role in preparation and delivery of oral reports.
- Evaluate effectiveness of group process in preparation and delivery of oral reports.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.
- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

11.2 The student will analyze and evaluate persuasive presentations.
- Critique the accuracy, relevance, and organization of evidence.
- Critique the clarity and effectiveness of delivery.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Algebra I

A.1 The student will solve linear equations and inequalities in one variable, solve literal equations (formulas) for a given variable and apply these skills to solve practical problems. Graphics calculators will be used to confirm algebraic solutions.

A.2 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables. Students will choose an appropriate computational technique, such as mental mathematics, calculator, or paper and pencil.

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

A.5 The student will analyze a given set of data for the existence of a pattern, represent the pattern algebraically and graphically, if possible, and determine if the relation is a function.

Computer Mathematics

COM.2 The student will write program specifications that define the constraints of a given problem. These specifications include descriptions of pre-conditions, post-conditions, the desired output, analysis of the available input, and an indication as to whether or not the program is solvable under the given conditions.

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.8 The student will design and implement computer graphics, which will include topics appropriate for the available programming environment as well as student background. Students will use graphics as an end in itself, as an enhancement to other output, and as a vehicle for reinforcing programming techniques.

COM.11 The student will describe the way the computer stores, accesses and processes variables, including the following topics: the use of variables versus constants, variables addresses, pointers, parameter passing, scope of variables, and local versus global variables. This will also include use of terminology, including memory, CPU, RAM, ROM, baud, byte, bits, floppy disc, and hard drive.

COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure..

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

Advanced Computer Information Systems 6613
CIP Code: 52.1201
Grade Levels: 11, 12 (36 weeks)
Prerequisite: Computer Information Systems

Description: Students apply problem-solving skills to real-life situations through advanced integrated software applications, programming, and expert systems. Students work individually and in groups to explore advanced computer maintenance activities, telecommunications, and networking. When this course is offered as a daily, multiple-period class, students study all of the above areas. When offered in comprehensive high school schedules, two or more of these areas are emphasized.

Competencies	Measures of Achievement
DUTY AREA 1. Using Advanced Word Processing Functions	
1.1 Merge files.	1.1 Student-produced copy, rated acceptable based on instructor's checklist
1.2 Sort data.	1.2 Student-produced copy, rated acceptable based on instructor's checklist
1.3 Create tables/columns.	1.3 Student-produced copy, rated acceptable based on instructor's checklist
1.4 Incorporate graphics into documents.	1.4 Student-produced copy, rated acceptable based on instructor's checklist
1.5 Design forms.	1.5 Student-produced copy, rated acceptable based on industry standards
1.6 Prepare outlines.	1.6 Student-produced copy, rated acceptable based on industry standards
1.7 Modify paper size (labels, envelopes, legal paper, landscape).	1.7 Student-produced copy, rated acceptable based on instructor's checklist
1.8 Design templates.	1.8 Student-produced copy, rated acceptable based on instructor's guidelines
1.9 Apply style sheets.	1.9 Student-produced copy, rated acceptable within software capabilities
1.10 Create macros.	1.10 On-screen execution of macro, rated acceptable based on instructor's checklist
1.11 Utilize word processing desktop publishing functions to create document (e.g., promotional flyer, newsletter).	1.11 Student-produced copy, rated acceptable based on instructor's checklist

Competencies	Measures of Achievement
DUTY AREA 2. Using Advanced Spreadsheet Functions	
2.1 Create macros.	2.1 Interactive execution of macro performed by student, rated acceptable based on instructor's checklist
2.2 Devise database (table).	2.2 Student-produced copy, rated acceptable based on instructor's checklist
2.3 Look up data in tables.	2.3 Instructor-prepared worksheet, rated acceptable based on instructor's checklist
2.4 Utilize advanced functions (e.g., @pmt, @pv, @vlookup).	2.4 Student-produced copy showing functions, rated acceptable based on instructor's checklist
2.5 Create and reformat complex graphs.	2.5 Student-produced copy, rated acceptable based on instructor's checklist
DUTY AREA 3. Using Advanced Database Functions	
3.1 Sort/index database.	3.1 Student-produced copy, all items in correct sorted order
3.2 Set filter.	3.2 Student-produced copy, rated acceptable based on instructor's checklist
3.3 Link databases.	3.3 On-screen listing of linked databases, databases linked with 100% accuracy
3.4 Create user-friendly application using database language.	3.4 Student-produced copy of program, program executes with 100% accuracy
3.5 Create customized input forms.	3.5 Interactive execution of input form, program executes with 100% accuracy
DUTY AREA 4. Integrating Software Applications	
4.1 Integrate word processing, database, and spreadsheet files.	4.1 Student-produced copy, rated acceptable based on instructor's checklist
4.2 Integrate graphics files with other application software.	4.2 Student-produced copy, rated acceptable based on instructor's checklist
4.3 Integrate sound files with other application software.	4.3 Interactive student demonstration, rated acceptable based on instructor's checklist
DUTY AREA 5. Managing Advanced Set-Up and Maintenance Activities	
5.1 Analyze software problems.	5.1 Case study, student participation rated acceptable based on instructor's guidelines
5.2 Use advanced configuration management techniques (e.g., config.sys, autoexec.bat, and system.ini files).	5.2 Instructor-prepared worksheet, rated acceptable based on instructor's checklist

Competencies		Measures of Achievement	
5.3	Backup/restore programs and data files.	5.3	Student-produced copy of directory, all items completed with 100% accuracy
5.4	Install software applications program and customize defaults.	5.4	On-screen execution of program, program runs with 100% accuracy and defaults rated acceptable based on instructor's checklist
DUTY AREA 6. Executing Networking Activities			
6.1	Identify types of local area networks.	6.1	Instructor-prepared test, average or above rating
6.2	Connect components of local area network.	6.2	Group project, network boots with 100% accuracy
6.3	Identify file structures on networks.	6.3	Instructor-prepared test, average or above rating
6.4	Identify topologies, transmission media, and cabling techniques.	6.4	Instructor-prepared test, average or above rating
6.5	Operate local area network.	6.5	Student demonstration, rated acceptable on instructor checklist
6.6	Install software for network.	6.6	On-screen execution of software, software must execute with 100% accuracy
6.7	Load protocol files on the network.	6.7	Student-produced copy of directory, rated acceptable based on instructor's checklist
6.8	Download software/files to specific work station.	6.8	Student-produced copy of directory, files copied with 100% accuracy
6.9	Generate protocol files on network work station.	6.9	Student-produced copy of directory, rated acceptable on instructor checklist
6.10	Use basic network protocol (e.g., TCP/IP).	6.10	Student demonstration, rated acceptable on instructor checklist
6.11	Handle network security files.	6.11	Student demonstration, rated acceptable on instructor checklist
6.12	Troubleshoot network problems.	6.12	Student demonstration, rated acceptable on instructor checklist
DUTY AREA 7. Executing Telecommunications Activities			
7.1	Explain telecommunications protocol.	7.1	Instructor-prepared test, average or above rating
7.2	Identify IEEE and ANSI standards in telecommunications.	7.2	Instructor-prepared test, average or above rating
7.3	Identify electronic connections required to establish microcomputer communications.	7.3	Instructor-prepared test, average or above rating
7.4	Connect components of telecommunications.	7.4	Student demonstration, rated acceptable on instructor checklist

Competencies		Measures of Achievement	
7.5	Obtain information from online database source.	7.5	Student-produced copy, information obtained with 100% accuracy
7.6	Install telecommunications software.	7.6	On-screen execution of software, software executes with 100% accuracy
7.7	Identify steps involved in producing teleconference.	7.7	Instructor-prepared test, average or above rating
DUTY AREA 8. Incorporating Multimedia Applications			
8.1	Explore the capabilities and limitations of music and voice synthesis.	8.1	Written and/or oral reports, rated acceptable based on instructor's guidelines
8.2	Use voice recognition in electronic systems.	8.2	Student demonstration, rated acceptable based on instructor's checklist
8.3	Retrieve, manipulate, and store digital audio (.wav) files.	8.3	Student demonstration and hard copy of directory, rated acceptable based on instructor's checklist
8.4	Retrieve, manipulate, and store digital video files.	8.4	Student demonstration and hard copy of directory, rated acceptable based on instructor's checklist
8.5	Install MIDI interface files.	8.5	Student-produced copy of directory, rated acceptable based on instructor's checklist
8.6	Access CD-ROM files.	8.6	Student-produced hard copy, files retrieved with 100% accuracy
DUTY AREA 9. Implementing Programming Activities			
9.1	Enter and run program.	9.1	Student-produced copy, rated acceptable based on instructor's guidelines
9.2	Code an application program using arithmetic functions.	9.2	Student-produced copy, rated acceptable based on instructor's guidelines
9.3	Code an application program using embedded data.	9.3	Student-produced copy, rated acceptable based on instructor's guidelines
9.4	Improve appearance of printed reports.	9.4	Student-produced copy, rated acceptable based on instructor's guidelines
9.5	Design interactive programs.	9.5	Student-produced copy, rated acceptable based on instructor's guidelines
9.6	Write programs to summarize data.	9.6	Student-produced copy, rated acceptable based on instructor's guidelines
9.7	Write programs to subtotal and group print.	9.7	Student-produced copy, rated acceptable based on instructor's guidelines
9.8	Write modular programs.	9.8	Student-produced copy, rated acceptable based on instructor's guidelines
9.9	Write programs using controlled loops.	9.9	Student-produced copy, rated acceptable based on instructor's guidelines

Competencies	Measures of Achievement
9.10 Implement tables.	9.10 Student-produced copy, rated acceptable based on instructor's guidelines
9.11 Code application program using sort routine.	9.11 Student-produced copy, rated acceptable based on instructor's guidelines
9.12 Code application program to display graphic scene.	9.12 Student-produced copy, rated acceptable based on instructor's guidelines
DUTY AREA 10. Conducting Expert Systems Activities	
10.1 Identify characteristics of artificial intelligence and expert systems.	10.1 Instructor-prepared test, average or above rating
10.2 Identify uses of expert systems in business (diagnosis, scheduling, planning, monitoring, process control, design, forecasting, training).	10.2 Case study, rated acceptable based on instructor's checklist
10.3 Distinguish between knowledge engineering tools (shells) and high-level programming languages as expert system development tools.	10.3 Written and/or oral report, rated acceptable based on instructor's guidelines
10.4 Use expert system shell environment to complete tasks.	10.4 Student demonstration, rated acceptable based on instructor's checklist
10.5 Create and execute an original induction table to develop a knowledge-based system.	10.5 Student-produced copy and on-screen execution of program, rated acceptable based on instructor's guidelines
10.6 Create and execute an expert system.	10.6 Student-produced copy and on-screen execution of program, rated acceptable based on instructor's guidelines
DUTY AREA 11. Preparing for Employment	
11.1 Identify the purposes and goals of the student organization.	11.1 Written or oral identification, rated acceptable according to instructor's guidelines
11.2 Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	11.2 Written or oral identification, rated acceptable according to instructor's guidelines
11.3 Update resume.	11.3 Student-produced copy, rated acceptable based on industry standards
11.4 Add representative work samples to portfolio.	11.4 Student-produced folder, rated acceptable based on instructor's checklist
11.5 Use electronic sources to research a company in preparation for a job interview.	11.5 Hard copy of data obtained and written or oral report, rated acceptable based on instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.2 The student will analyze and evaluate persuasive presentations.
- Critique the accuracy, relevance, and organization of evidence.
- Critique the clarity and effectiveness of delivery.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Algebra I

A.1 The student will solve linear equations and inequalities in one variable, solve literal equations (formulas) for a given variable and apply these skills to solve practical problems. Graphics calculators will be used to confirm algebraic solutions.

A.2 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables. Students will choose an appropriate computational technique, such as mental mathematics, calculator, or paper and pencil.

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

A.5 The student will analyze a given set of data for the existence of a pattern, represent the pattern algebraically and graphically, if possible, and determine if the relation is a function.

Geometry

G.2 The student will use pictorial representations, including computer software and coordinate methods to solve problems involving symmetry and transformation. This will include
- using formulas for finding distance, midpoint, and slope;
- investigating and determining whether a figure is symmetric with respect to a line or a point; and
- determining whether a figure has been translated, reflected, or rotated.

Computer Mathematics

COM.1 The student will describe the program development cycle: defining the problem, planning a solution, carrying out the plan, debugging the program, and providing program documentation.

COM.2 The student will write program specifications that define the constraints of a given problem. These specifications include descriptions of pre-conditions, post-conditions, the desired output, analysis of the available input, and an indication as to whether or not the program is solvable under the given conditions.

COM.3 The student will design a step-by-step plan (algorithm) to solve a given problem. The plan will be in the form of a program flowchart, pseudo code, a hierarchy chart and/or data flow diagram.

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.5 The student will divide a given problem into manageable sections (modules) by task and implement the solution. The modules will include an appropriate user-defined function, subroutines, and procedures. Enrichment topics can include user-defined libraries (units) and object-oriented programming.

COM.6 The student will design and implement the input phase of a program, which will include designing screen layout and getting information into the program by way of user interaction, data statements (BASIC), and/or file input. The input phase also will include methods of filtering out invalid data (error trapping).

COM.7 The student will design and implement the output phase of a computer program, which will include designing output layout, accessing a variety of output devices, using output statements, and labeling results.

COM.8 The student will design and implement computer graphics, which will include topics appropriate for the available programming environment as well as student background. Students will use graphics as an end in itself, as an enhancement to other output, and as a vehicle for reinforcing programming techniques.

COM.9 The student will define simple variable data types that include integer, real (fixed and scientific notation), character, string, and Boolean.

COM.10 The student will use appropriate variable data types, including integer, real (fixed and scientific notation), character, string, and Boolean. This will also include variables representing structured data types.

COM.11 The student will describe the way the computer stores, accesses, and processes variables, including the following topics: the use of variables versus constants, variables addresses, pointers, parameter passing, scope of variables, and local versus global variables. This will also include use of terminology, including memory, CPU, RAM, ROM, baud, byte, bits, floppy disc, and hard drive.

COM.12 The student will translate a mathematical expression into a computer statement, which involves writing assignment statements and using the order of operations.

COM.13 The student will select and implement built-in (library) functions in processing data, which include trigonometric functions, absolute value functions, random number functions, end of line, end of file, and string.

COM.14 The student will implement conditional statements that include if/then, if/then/else, case statements, and Boolean logic.

COM.15 The student will implement a loop, including iterative loops, pretest loops, and post-test loops. Other topics will include single entry point, single exit point, preconditions, post-conditions and loop invariance.

COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure.

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.18 The student will test a program using an appropriate set of data. The set of test data should be appropriate and complete for the type of program being tested.

COM.19 The student will debug a program using appropriate techniques (e.g., appropriately placed controlled breaks, the printing of intermediate results, and other debugging tools available in the programming environment), and identify the difference between syntax errors and logic errors.

COM.20 The student will properly document a program including the preconditions and post-conditions of program segments, input/output specifications, the step-by-step plan, the test data, a sample run, and the program listing with appropriately placed comments.

COM.21 The student will design, write, test, debug, and document a complete structured program which requires the synthesis of many of the concepts contained in previous standards.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

Desktop/Multimedia Presentations 6630
CIP Code: 52.0407
Grade Levels: 11, 12 (18/36 weeks)
Prerequisite: Keyboarding
Computer Applications recommended

Description: Students develop proficiency in using desktop publishing software to create a variety of business publications. Students work with sophisticated hardware and software to develop multimedia presentations.

Note: This task list contains competencies for a 36-week course. The list should be adjusted for courses of shorter duration. These tasks are guidelines that may need to be added or deleted to meet local needs. These duty areas can be adapted to meet local budgets and equipment restraints.

Competencies	Measures of Achievement
DUTY AREA 1. Demonstrating Knowledge of Hardware, Software, and Operating System Requirements	
1.1 Describe the differences among word processing, desktop publishing, and multimedia.	1.1 Written or oral description, rated acceptable based on criteria specified in instructor's guidelines
1.2 Identify operating system requirements (DOS, Windows, Macintosh) for most desktop publishing and multimedia presentation applications and software programs.	1.2 Written or oral identification, completed with 100% accuracy
1.3 Evaluate popular page layout software programs and other software application programs that may be used for desktop publishing, presentation, and multimedia applications.	1.3 Written evaluation, rated acceptable based on criteria specified in instructor's guidelines
1.4 Analyze the system hardware requirements for most desktop publishing/multimedia presentation applications and software programs.	1.4 Written analysis, rated acceptable based on criteria specified in instructor's guidelines
1.5 Compare advantages and disadvantages of monitor size and screen resolution for desktop publishing.	1.5 Individual or group presentation, rated acceptable based on instructor-prepared rating form
1.6 Identify types and characteristics of input devices used with desktop publishing/multimedia presentations.	1.6 Oral or written identification, rated average or above
1.7 Compare the advantages and disadvantages of printer types in terms of their appropriateness for desktop publishing.	1.7 Oral or written description, rated average or above

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Competencies		Measures of Achievement	
1.8	Compare advantages and disadvantages of display devices in terms of their appropriateness for multimedia presentations.	1.8	Oral or written description, rated average or above
DUTY AREA 2. Designing Desktop Published Documents			
2.1	Create, store, and edit (in exportable format) documents and graphics for use in designing various desktop publishing applications such as flyers, brochures, or newsletters.	2.1	Student-prepared document, rated acceptable based on instructor's guidelines
2.2	Determine the most appropriate type of desktop publication based upon the purpose of the publication, intended audience, life of publication, cost limits, and time constraints.	2.2	Individual or group presentation, rated acceptable based on criteria specified in instructor's guidelines
2.3	Apply principles of design, layout, and typography in presentation of text.	2.3	Student-prepared screen or printed copy, rated acceptable based on instructor's guidelines
2.4	Plan a layout in terms of design for ease of readability and attractiveness by determining use of white space, column position and spacing, page margins, and graphic placements (including graphic boxes, lines, illustrations, and images).	2.4	Student-prepared storyboard, all items rated acceptable based on industry standards
DUTY AREA 3. Producing Desktop Published Documents			
3.1	Create and use masterpages.	3.1	Student-prepared screen or printed copy, rated acceptable according to industry standards
3.2	Create, edit, and save style sheets.	3.2	Student-prepared screen or printed copy, rated acceptable according to industry standards
3.3	Create multi-page and multi-column documents.	3.3	Student-prepared screen or printed copy, rated acceptable according to industry standards
3.4	Demonstrate use of keyboard shortcuts.	3.4	Student demonstration, rated acceptable based on instructor-prepared checklist
3.5	Create a desktop publication that includes graphics in the form of illustrations (e.g., pictures/diagrams created with drawing and paint tools), clip art, boxes, shading, and lines.	3.5	Student-prepared screen or printed copy, rated acceptable according to industry standards

Competencies		Measures of Achievement	
3.6	Generate a variety of documents such as flyers, bulletins, proposals, reports, business cards, greeting cards, brochures, transparencies, and handouts.	3.6	Student-prepared screens or printed copies, rated acceptable according to industry standards
DUTY AREA 4. Importing Text and Graphics from Other Software Programs			
4.1	Import text and tables from a word processing program into a desktop published document.	4.1	Student-prepared document, printout rated acceptable based on instructor's guidelines
4.2	Import charts, text, or tables from spreadsheet or database software programs into a desktop publication.	4.2	Student-prepared document, printout rated acceptable based on instructor's guidelines
4.3	Incorporate scanned and digitized graphics/text and paint files into a desktop publication.	4.3	Student-prepared document, printout rated acceptable based on instructor's guidelines
DUTY AREA 5. Using Principles and Techniques of Journalism			
5.1	Compose news articles and feature stories.	5.1	Student-produced document, rated acceptable based on standard English guidelines and journalistic practice
5.2	Compose headlines and captions.	5.2	Student-produced document, rated acceptable based on journalistic practice
5.3	Proofread, edit, and revise text using standard journalistic symbols.	5.3	Student-produced document, rated acceptable based on standard journalistic symbols
5.4	Design layout of newsletters.	5.4	Student-produced document, all items rated acceptable based on an instructor-prepared checklist
DUTY AREA 6. Producing Multimedia Using Presentation Software			
6.1	Identify the components of an effective presentation using existing presentations.	6.1	Instructor-prepared worksheet, rated acceptable based on industry standards
6.2	Demonstrate basic features of presentation software.	6.2	Student demonstration, all items rated acceptable based on instructor-prepared checklist
6.3	Use, edit, and create master slides and templates.	6.3	Student-prepared screen, rated acceptable according to industry standards
6.4	Draw and edit objects incorporating fills, borders, and lines.	6.4	Student-prepared screen, rated acceptable according to industry standards

Competencies	Measures of Achievement
6.5 Select and create the appropriate graph/chart to display statistical data.	6.5 Student-produced screen, rated acceptable on instructor-prepared rating form
6.6 Import, export, or link embedded objects.	6.6 Student demonstration, linked with 100% accuracy
6.7 Create or edit visual communications involving slides, videos, and other photography-based applications.	6.7 Student demonstration, rated acceptable based on instructor's guidelines
6.8 Access and capture still and video clips from laser disks, CD-ROM, or video tape.	6.8 Student demonstration, rated acceptable based on instructor's guidelines
6.9 Incorporate audio and visual elements.	6.9 Student demonstration, rated acceptable based on instructor's guidelines
6.10 Incorporate transitions, special effects, and timing.	6.10 Student demonstration, rated acceptable based on industry standards
6.11 Enhance an existing presentation.	6.11 Student demonstration comparing the original version with the enhanced version, rated acceptable based on instructor's criteria
6.12 Deliver a presentation incorporating multimedia components.	6.12 Student demonstration, rated by peers as acceptable based on instructor-prepared rating form
DUTY AREA 7. Producing Multimedia/Interactive Presentations Using Authoring Systems	
7.1 Identify the components of an interactive presentation developed with authoring software.	7.1 Instructor-prepared worksheet, rated acceptable based on industry standards
7.2 Demonstrate basic features of authoring software.	7.2 Student demonstration, all items rated acceptable based on an instructor-prepared checklist
7.3 Use, edit, and create master slide/base page.	7.3 Student-prepared screen, rated acceptable according to industry standards
7.4 Draw and edit free hand images incorporating fills, borders, and lines as appropriate.	7.4 Student-prepared screen, rated acceptable according to industry standards
7.5 Import, export, or link embedded objects.	7.5 Student demonstration, objects linked with 100% accuracy
7.6 Plan a presentation.	7.6 Student-prepared storyboard, all items rated acceptable based on industry standards
7.7 Create folders/stacks with text boxes, picture boxes, and buttons to be used in the presentation.	7.7 Student-prepared presentation, all items rated acceptable based on an instructor-prepared checklist
7.8 Access and capture still and video clips from laser disks, CD-ROM, video tape, and/or video camera.	7.8 Student demonstration, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
7.9	Access and capture recorded and live audio from microphone, laser disk, CD-ROM, video tape, and/or video camera.	7.9	Student demonstration, rated acceptable based on instructor's guidelines
7.10	Incorporate audio and visual elements.	7.10	Student demonstration, rated acceptable based on instructor's guidelines
7.11	Incorporate transitions, special effects, and timing.	7.11	Student demonstration, rated acceptable based on industry standards
7.12	Develop authoring tutorial using scripting commands.	7.12	Student demonstration, rated by peers as acceptable based on instructor-prepared rating form
7.13	Field test a tutorial using representatives of target audience.	7.13	Student designer debugs tutorial based on end results of field test
7.14	Evaluate peer-prepared tutorials.	7.14	Peer evaluation using an assessment tool, rated acceptable based on instructor's guidelines
DUTY AREA 8. Exploring Legal and Ethical Aspects			
8.1	Identify copyright and patent laws pertaining to scanned images and documents, electronic clip art, recorded sounds, recorded and scanned photography, trademarks, and other elements adapted for use in desktop publishing and multimedia presentations.	8.1	Interpretation of case studies, rated acceptable based on copyright and patent laws
8.2	Identify situations where scanned/digitized audio visual elements, documents, and electronic graphics may legally be used but are ethically questionable.	8.2	Role-play activity, rated acceptable based on instructor-prepared form
8.3	Identify licensing agreements associated with desktop publishing and multimedia presentation software.	8.3	Case studies, rated average or above
DUTY AREA 9. Working with Reference Materials, Documentation, and Other Resources			
9.1	Use documentation and reference materials to analyze problems encountered during creation of desktop-published documents and multimedia presentations.	9.1	Ongoing evaluation, acceptable rating based on instructor's ongoing observation
9.2	Resolve problems encountered during creation of desktop published documents and multimedia presentations.	9.2	Ongoing evaluation, rated acceptable based on instructor's ongoing observation

Competencies	Measures of Achievement
DUTY AREA 10. Preparing for Employment	
10.1 Identify the purposes and goals of the student organization.	10.1 Written or oral identification, rated acceptable according to instructor's guidelines
10.2 Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	10.2 Student demonstration, all items rated acceptable according to instructor's guidelines
10.3 Create or update printed resume using desktop publishing features.	10.3 Student-produced resume, rated acceptable based on instructor's checklist
10.4 Describe ways that desktop publishing and multimedia presentations can be used in business and industry.	10.4 Small group presentation, rated acceptable based on criteria specified in instructor's guidelines
10.5 Identify careers, including self-employment opportunities, in the desktop publishing/ multimedia presentations fields.	10.5 Written or oral report, rated acceptable based on instructor's guidelines
10.6 Assemble a career portfolio of a variety of printed documents/and or multimedia-produced presentations in the course.	10.6 Student-produced portfolio, all items rated acceptable based on instructor-prepared checklist
10.7 Apply for a promotion.	10.7 Student-produced document, rated acceptable according to business standards
10.8 Identify the steps to follow in resigning from a position.	10.8 Written or oral identification, rated acceptable according to instructor's guidelines

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English

Grade 11

11.1 The student will make persuasive presentations.
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- Present evidence clearly and convincingly.
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- Critique the accuracy, relevance, and organization of evidence.
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- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Geometry

G.2 The student will use pictorial representations, including computer software and coordinate methods to solve problems involving symmetry and transformation. This will include
- using formulas for finding distance, midpoint, and slope;
- investigating and determining whether a figure is symmetric with respect to a line or a point; and
- determining whether a figure has been translated, reflected, or rotated.

Computer Mathematics

COM.1 The student will describe the program development cycle: defining the problem, planning a solution, carrying out the plan, debugging the program, and providing program documentation.

COM.3 The student will design a step-by-step plan (algorithm) to solve a given problem. The plan will be in the form of a program flowchart, pseudo code, a hierarchy chart and/or data flow diagram.

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.7 The student will design and implement the output phase of a computer program, which will include designing output layout, accessing a variety of output devices, using output statements, and labeling results.

COM.8 The student will design and implement computer graphics, which will include topics appropriate for the available programming environment as well as student background. Students will use graphics as an end in itself, as an enhancement to other output, and as a vehicle for reinforcing programming techniques.

COM.11 The student will describe the way the computer stores, accesses and processes variables, including the following topics: the use of variables versus constants, variables addresses, pointers, parameter passing, scope of variables, and local versus global variables. This will also include use of terminology, including memory, CPU, RAM, ROM, baud, byte, bits, floppy disc, and hard drive.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

Finance 6120
CIP Code 52.0899
Grade Levels: 11, 12 (18, 36 weeks)
Prerequisite: None

Description: Students explore many facets of financial decision-making involved in daily life. Skills in money management, record keeping, and banking are enhanced through the study of basic concepts of economics, insurance, credit, and other related topics. As a year offering, the course will also prepare students to plan, manage, and analyze the financial and monetary aspects and success of business enterprises, banking institutions, or other organizations.

Note: This list contains competencies for a 36-week course. In the list of competencies below, an asterisk(*) appears beside duty areas generally considered as essential whether the course is 18 or 36 weeks.

Competencies		Measures of Achievement	
***DUTY AREA 1. Developing Consumer Skills**			
1.1	Identify steps in making a purchase decision.	1.1	Individual or group activity, all items rated acceptable based on instructor-prepared checklist
1.2	Develop comparison shopping skills.	1.2	Individual activity, rated acceptable based on instructor's guidelines
1.3	Identify consumer protection and assistance agencies.	1.3	Student-researched list, rated average or above
1.4	Develop filing system for personal finance records.	1.4	Student-produced file, all items rated acceptable based on instructor's guidelines
1.5	Examine the impact of advertising and marketing on consumer decision-making.	1.5	Individual or group activity, rated acceptable based on instructor's guidelines
1.6	Access financial information (using e.g., electronic, verbal, and printed sources).	1.6	Individual or group activity, rated acceptable based on instructor's guidelines
***DUTY AREA 2. Planning for Transportation, Housing, and Leisure Expenses**			
2.1	Plan for the purchase of an vehicle, including taxes, maintenance, and other incidental costs.	2.1	Individual or small group presentation, rated acceptable in accordance with instructor's guidelines
2.2	Outline the process of renting an apartment, including analyzing a contract and estimating moving costs and installation charges.	2.2	Individual or small group project, rated acceptable based on instructor's guidelines
2.3	Interpret the provisions of a residential lease agreement.	2.3	Student-completed worksheet, rated average or above

Competencies		Measures of Achievement	
2.4	Identify utility, services, maintenance, and other regular expenses involved in independent living (e.g., furniture and equipment rental, etc.).	2.4	Individual or small group activity, rated acceptable based on instructor's guidelines
2.5	Plan a budget for a major expense (e.g., gifts, vacation, celebration).	2.5	Student-produced budget, all items rated acceptable based on instructor's guidelines
2.6	Identify weekly, monthly, and yearly leisure expenditures (e.g., video rentals, movies, sports or exercise, computer online service, etc.).	2.6	Student-completed worksheet, rated average or above
***DUTY AREA 3. Handling Banking Transactions**			
3.1	Identify services provided by banks.	3.1	Written report, rated acceptable based on instructor's guidelines
3.2	Prepare checks, stubs, and check register.	3.2	Student-produced checks, check stub, and check register, completed with 100% accuracy
3.3	Demonstrate endorsement functions.	3.3	Student-produced endorsements, completed with 100% accuracy
3.4	Reconcile bank statements.	3.4	Student-produced bank reconciliations, completed with 100% accuracy
3.5	Make deposits and withdrawals.	3.5	Student-produced deposit and withdrawal forms, completed with 100% accuracy
3.6	Evaluate the various savings mechanisms (e.g., interest-bearing checking accounts, savings accounts, savings bonds, certificates of deposit, etc.).	3.6	Individual or group project (e.g., student visit to bank to complete teacher worksheet), all items rated acceptable based on instructor-prepared checklist
***DUTY AREA 4. Handling Credit/Loan Functions**			
4.1	Evaluate the various methods of financing a purchase (e.g., loan, installment plan, layaway, credit card, etc.) using a variety of electronic methods of calculation.	4.1	Individual or group project with written and oral presentation, all items rated acceptable on instructor-prepared checklist
4.2	Identify qualifications needed to obtain credit.	4.2	Student-completed worksheet, rated average or above
4.3	Identify basic provisions of credit and loan laws.	4.3	Student-completed worksheet, rated average or above
4.4	Identify the purposes and procedures involved in credit checks and credit reports.	4.4	Written report, rated acceptable based on instructor's guidelines
4.5	Compare terms and conditions of various credit sources.	4.5	Student-completed worksheet, rated average or above

Competencies		Measures of Achievement	
4.6	Complete a sample credit application.	4.6	Student-completed credit application, completed according to industry standards
4.7	Identify sources of assistance for credit problems.	4.7	Student-researched report, rated average or above
4.8	Identify the need for a sound credit rating.	4.8	Student-completed activity, rated acceptable based on instructor's guidelines
4.9	Identify the concepts and effects of bankruptcy.	4.9	Written report, rated acceptable based on instructor's guidelines
4.10	Compare the costs and conditions (secured or unsecured) involved with various types of loans (e.g., educational, automobile, home improvement, etc.).	4.10	Student-completed worksheet, rated average or above
***DUTY AREA 5. Analyzing Insurance Functions**			
5.1	Examine types of automobile insurance coverage.	5.1	Individual or small group analysis of case studies, rated acceptable based on instructor's guidelines
5.2	Examine types of property coverage.	5.2	Individual or small group analysis of case studies, rated acceptable based on instructor's guidelines
5.3	Examine types of life insurance coverage.	5.3	Individual or small group analysis of case studies, rated acceptable based on instructor's guidelines
5.4	Examine types of health insurance coverage.	5.4	Individual or small group analysis of case studies, rated acceptable based on instructor's guidelines
5.5	Prepare a sample health insurance claim form.	5.5	Student-completed health insurance claim form, rated acceptable based on industry standards
5.6	Examine types of insurance that provide for income security (e.g., disability, retirement, unemployment, etc.).	5.6	Written report, rated acceptable based on instructor's guidelines
***DUTY AREA 6. Conducting Tax Functions**			
6.1	Identify types of taxes.	6.1	Instructor-prepared quiz, rated average or above
6.2	Compute sales taxes on products.	6.2	Student-completed worksheet, calculations completed with 100% accuracy
6.3	Investigate options for payroll tax deductions.	6.3	Written report, rated acceptable based on instructor's guidelines
6.4	Explore potential tax deductions and credits (e.g., health expenses, child/elderly care costs, etc.).	6.4	Written or oral report, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
6.5	Complete a standard W-4 form.	6.5	Student-completed W-4 form, completed with 100% accuracy
6.6	Complete a state income tax form (including electronic formats).	6.6	Student-completed state income tax form, completed with 100% accuracy
6.7	Complete federal income tax forms (short form, itemized form) including electronic formats.	6.7	Student-completed federal income tax forms, completed with 100% accuracy
***DUTY AREA 7. Preparing a Personal Finance Plan**			
7.1	Identify short-term and long-term personal financial goals.	7.1	Student-completed activity, rated acceptable based on instructor's guidelines
7.2	Identify income sources.	7.2	Student-completed worksheet, rated acceptable based on instructor's guidelines
7.3	Identify anticipated expenses.	7.3	Student-completed worksheet, rated acceptable based on instructor's guidelines
7.4	Prepare a personal property inventory.	7.4	Student-produced personal property inventory, calculations completed with 100% accuracy
7.5	Examine components and purposes of a personal net worth statement.	7.5	Student-completed activity, rated acceptable based on instructor's guidelines
7.6	Identify investment and savings options.	7.6	Simulated individual or group investment project, all components rated acceptable based on instructor's guidelines
7.7	Identify costs and income sources for retirement.	7.7	Written report, rated acceptable based on instructor's guidelines
7.8	Examine components and purposes of a will.	7.8	Individual or group activity, rated acceptable based on instructor's guidelines
7.9	Develop a personal financial budget for short- and long-term planning.	7.9	Student-produced personal financial budget, calculations completed with 100% accuracy
7.10	Examine the fundamental workings of the Social Security System and the system's effects on retirement planning.	7.10	Written and/or oral description, rated acceptable based on instructor's guidelines
DUTY AREA 8. Investigating the Monetary System			
8.1	Explain how certain events (e.g., the Great Depression) have influenced the banking system and other financial institutions.	8.1	Written or oral report, rated acceptable based on instructor's guidelines
8.2	Identify the functions of the banking system.	8.2	Instructor-prepared test, rated average or above
8.3	Describe the functions of money.	8.3	Oral or written report, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
8.4	Compare the U.S. monetary system with the international monetary system (e.g., mediums of exchange).	8.4	Student-completed activity, rated acceptable based on instructor's guidelines
DUTY AREA 9. Investigating Economic Principles			
9.1	Analyze characteristics of major economic systems.	9.1	Student-completed activity, rated acceptable based on instructor's guidelines
9.2	Explain how the activities of an economic system can be measured (e.g., GNP, stock market, consumer index).	9.2	Instructor-prepared test, rated average or above
9.3	Describe the roles of various financial institutions (banks, stock market, credit unions, etc.) within the economy.	9.3	Instructor-prepared test, rated average or above
9.4	Examine interaction among financial institutions (Federal Reserve, stock market, etc.).	9.4	Individual or group simulated activity (e.g., stock market game), student participation evaluated as acceptable based on instructor's guidelines
9.5	Explain the impact of supply and demand (e.g., on spending power, unemployment, environment).	9.5	Individual or group case studies, rated average or above
9.6	Analyze the impact of the international economy on American business (e.g., import/export issues, balance of trade).	9.6	Individual or group case studies, rated average or above
9.7	Investigate the effects of government intervention on the economy (e.g., market influence, taxes, regulations, environment).	9.7	Individual or group case studies, rated average or above
9.8	Describe the major factors in production (e.g., labor unions, technology, worker incentives).	9.8	Instructor-prepared test, rated average or above
9.9	Identify the individual's role in the free enterprise system.	9.9	Student-produced essay, rated average or above based on instructor's guidelines
DUTY AREA 10. Planning Financial Aspects of a Business Enterprise			
10.1	Describe the effects of various types of business ownership on financial planning.	10.1	Individual or group activity, rated average or above based on instructor's guidelines
10.2	Examine the goals of the company or institution.	10.2	Individual- or group-researched report, rated acceptable based on instructor's guidelines
10.3	Estimate expenses.	10.3	Individual- or group-completed worksheet, rated acceptable based on instructor's guidelines

Competencies	Measures of Achievement
10.4 Identify break-even point.	10.4 Individual- or group-completed worksheet, calculations completed with 100% accuracy
10.5 Set profit goal.	10.5 Individual or group activity, calculations completed with 100% accuracy
10.6 Identify sources of capital.	10.6 Instructor-prepared worksheet, rated average or above
10.7 Describe how a balance sheet reflects the financial position of a business.	10.7 Instructor-prepared test, rated average or above
10.8 Explain the concepts of cash flow and profit/loss.	10.8 Instructor-prepared test, rated average or above
10.9 Investigate government regulations affecting financial aspects of a business.	10.9 Written research report, rated acceptable based on instructor's guidelines
DUTY AREA 11. Managing Financial Activities for a Business Enterprise	
11.1 Arrange numbers, dates, and headings for maintaining business files.	11.1 Business simulation, rated acceptable based on instructor's guidelines
11.2 Prepare and record daily business forms (e.g., sales slips, statements of account, inventory cards, purchase requisitions, purchase orders, invoices).	11.2 Business simulation, forms and calculations completed with 100% accuracy
11.3 Record cash receipts.	11.3 Business simulation, forms and calculations completed with 100% accuracy
11.4 Record receipts and payments in journals and ledgers.	11.4 Business simulation, forms and calculations completed with 100% accuracy
11.5 Prepare a proof of cash.	11.5 Business simulation, forms and calculations completed with 100% accuracy
11.6 Establish and maintain a petty cash system.	11.6 Business simulation, forms and calculations completed with 100% accuracy
11.7 Prepare payroll journals.	11.7 Business simulation, forms and calculations completed with 100% accuracy
11.8 Demonstrate cashier functions.	11.8 Student-completed transactions, completed with 100% accuracy
DUTY AREA 12. Exploring Management Functions	
12.1 Interpret financial statements.	12.1 Student-analyzed financial statement, rated average or above

Competencies		Measures of Achievement	
12.2	Identify the options for financial planning and working capital management (e.g., short-term financing, fixed assets management, long-term debt and equity funds).	12.2	Individual or group activity, rated acceptable based on instructor's guidelines
12.3	Identify sources of long-term business financing (e.g., term loans, lease arrangements financing, equipment trust financing).	12.3	Written report, rated acceptable based on instructor's guidelines
12.4	Identify risks that affect business operations.	12.4	Written report, rated acceptable based on instructor's guidelines
12.5	Identify the primary and secondary markets for long-term capital (securities options, futures).	12.5	Instructor-prepared test, rated average or above
12.6	Identify investment banking regulations.	12.6	Instructor-prepared test, rated average or above
12.7	Prepare a financial analysis.	12.7	Individual or group case study, rated acceptable based on instructor's guidelines
12.8	Prepare a business plan.	12.8	Student-completed activity, rated acceptable based on instructor's guidelines
12.9	Analyze the effects of ethics on business and financial management decisions.	12.9	Individual or group case study, rated acceptable based on instructor's guidelines
***DUTY AREA 13. Exploring Careers in Banking and Finance**			
13.1	Investigate career opportunities in banking and finance.	13.1	Student-completed activity, rated acceptable based on instructor's guidelines
13.2	Identify types of training/experience required for various banking/finance positions.	13.2	Student-researched report, rated acceptable based on instructor's guidelines
13.3	Prepare an employment portfolio (letter of application, resume, application form, etc.).	13.3	Student-produced employment portfolio, rated mailable according to industry standards
13.4	Apply for a promotion.	13.4	Student-produced document, rated acceptable based on industry standards
13.5	Identify the steps to follow in resigning from a position.	13.5	Written or oral identification, rated acceptable according to instructor's guidelines
13.6	Identify the purposes and goals of the student organization.	13.6	Written or oral identification, rated acceptable according to instructor's guidelines
13.7	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	13.7	Student demonstration, all items rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.2 The student will analyze and evaluate persuasive presentations.
- Critique the accuracy, relevance, and organization of evidence.
- Critique the clarity and effectiveness of delivery.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Computer Mathemtaics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

History and Social Science

Grade 11

11.10 The student will analyze and explain the Great Depression, with emphasis on
- causes and effects of changes in business cycles;
- weaknesses in key sectors of the economy in the late 1920's;
- Unites States government economic policies in the late 1920's;
- causes and effects of the Stock Market Crash;
- the impact of the Depression on the American people;
- the impact of New Deal economic policies; and
- the impact of the expanded role of government in the economy since the 1930's.

11.18 The student will develop skills in discussion, debate, and persuasive writing with respect to enduring issues and determine how divergent viewpoints have been addressed and reconciled. Such issues include
- civil disobedience vs. the rule of law;

- slavery and its impact;
- the relationship of government to the individual in economic planning and social programs;
- freedom of the press vs. the right to a fair trial;
- the tension between majority rule and minority rights;
- problems of intolerance toward racial, ethnic, and religious groups in American society; and
- the evolution of rights, freedoms, and protection through political and social movements.

Grade 12

12.7 The student will analyze and compare national and state governments, with emphasis on
- the structures, functions, and authority of each;
- the principles of federalism, separation of powers, and checks and balances;
- the extent to which powers is shared rather than divided or separated; and
- procedures for constitutional amendment.

12.14 The student will compare the United States political and economic systems with those of major democratic and authoritarian nations, in terms of
- the structures and powers of political institutions;
- the rights and powers of the governed including grass roots citizen movements;
- economic goals and institutions and the role of government in the economy;
- the relationships between economic freedom and political freedom; and
- the allocation of resources and its impact on productivity.

12.15 The student will analyze the United States market economy, in terms of
- labor, capital, and natural resources;
- the interaction of supply and demand in markets;
- the role of private ownership, private enterprise, and profits;
- the relationships of households, firms, and government;
- labor/management relationships; and
- relationships to the global economy.

12.16 The student will analyze the role of government in the United States economy, with emphasis on
- monetary and fiscal policies;
- interstate commerce and international trade policies;
- providing favorable conditions for markets;
- providing public goods and services;
- protecting the environment; and
- promoting economic growth.

12.18 The student will define common economic terms, including productivity, recession, depression, the business cycle, and inflation, and explain and interpret indicators of economic performance, including gross domestic product, consumer price index, unemployment rate, balance of trade, and stock market averages.

Legal Systems Administration 6735
CIP Code: 52.0403
Grade Levels: 11, 12 (18, 36 weeks)
Prerequisite: Keyboarding Applications
Office Administration recommended

Description: Students completing Office Administration and wishing to gain employment in the legal field may take this course to learn how to use legal terminology and procedures useful in preparing legal documents and functioning effectively in a law office. When this course is offered as a daily multiple-period class, the competencies identified in the Office Administration course may be included.

Note: This task list contains competencies for a 36-week, single-period course. The list should be adjusted for an 18-week course. The task list does not contain tasks taught in Office Administration.

Competencies	Measures of Achievement
DUTY AREA 1. Conducting Customer Service Activities	
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks. For additional customer service tasks, see Duty Areas 1, 2, and 6 in Office Administration.)	
1.1 Determine referrals based on legal specialty and urgency of request.	1.1 Student demonstration, rated acceptable based on instructor's guidelines
1.2 Gather client information.	1.2 Student-completed activity, rated acceptable according to instructor's guidelines
1.3 Communicate with officers of the court, administrative agencies, and resource persons.	1.3 Written or oral presentation, rated acceptable based on instructor's guidelines
1.4 Identify procedures for professional handling of client complaints.	1.4 Role-play, rated acceptable based on instructor's guidelines
DUTY AREA 2. Managing Records and Files	
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks. For additional record keeping tasks, see Duty Area 4 in Office Administration.)	
2.1 Prepare records for new clients.	2.1 Student-prepared records, rated acceptable based on business/court standards

Competencies		Measures of Achievement	
2.2	Update client records.	2.2	Student-produced records, rated acceptable based on business/court standards
2.3	Establish and maintain a forms and template file.	2.3	Student-produced file, rated acceptable based on instructor's guidelines
2.4	Establish and maintain a reference manual.	2.4	Student-produced manual, rated acceptable based on instructor's guidelines
2.5	Add supplements to law library.	2.5	Student demonstration, rated acceptable based on business/court standards
2.6	Maintain a database of officers of the court, administrative agencies, and resource persons.	2.6	Student-produced database, rated acceptable based on instructor's guidelines
DUTY AREA 3. Managing Financial Functions			
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks. For additional financial tasks, see Duty Area 3 in Office Administration.)			
3.1	Collect fees for reporting depositions and court records.	3.1	Student-completed activity, totals calculated at 100% accuracy and transaction rated acceptable based on instructor's guidelines
3.2	Maintain firm and client checkbook accounts.	3.2	Student-prepared account records, prepared and posted with 100% accuracy, according to instructor's guidelines
3.3	Key attorney's time sheet.	3.3	Student-produced document, rated acceptable based on instructor's guidelines
3.4	Initiate and maintain client account records (including time spent in meetings and phone calls with clients).	3.4	Student-prepared records, entries posted on client account with 100% accuracy, according to instructor's guidelines
3.5	Prepare billing statements.	3.5	Student-prepared statements, statements completed and totals entered with 100% accuracy, according to instructor's guidelines
DUTY AREA 4. Preparing Correspondence			
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks. For additional correspondence tasks, see Duty Area 1 in Office Administration.)			
4.1	Use correct legal terms (both English and Latin) in correspondence.	4.1	Instructor-prepared test, average or above rating

Competencies		Measures of Achievement	
4.2	Prepare letters in legal format from handwritten copy, from rough-draft copy, and from dictation.	4.2	Student-produced hard copy, rated acceptable based on business/court criteria for mailability
4.3	Edit and revise legal correspondence.	4.3	Student-produced hard copy, rated acceptable based on business/court criteria for mailability
DUTY AREA 5. Preparing Nonlitigation Documents			
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks.)			
5.1	Key agreements, contracts, leases from dictation/transcription.	5.1	Student-produced document, rated as mailable based on instructor/court standards
5.2	Key affidavits.	5.2	Student-produced document, rated as mailable based on instructor/court standards
5.3	Key acknowledgments.	5.3	Student-produced document, rated as mailable based on instructor/court standards
5.4	Key and process bills of sale and deeds.	5.4	Student-produced document, rated as mailable based on instructor/court standards
5.5	Key probate and final accounting of estates.	5.5	Student-produced document, rated as mailable based on instructor/court standards
5.6	Draft and key wills and codicils.	5.6	Student-produced document, rated as mailable based on instructor/court standards
5.7	Prepare promissory notes.	5.7	Student-produced document, rated as mailable based on instructor/court standards
5.8	Prepare powers of attorney.	5.8	Student-produced document, rated as mailable based on instructor/court standards
5.9	Prepare articles of incorporation.	5.9	Student-produced document, rated as mailable based on instructor/court standards
5.10	Prepare corporation minutes books and stock certificates.	5.10	Student-produced document, rated as mailable based on instructor/court standards

Competencies	Measures of Achievement
5.11 Prepare collection letters or forms.	5.11 Student-produced document, rated as mailable based on instructor/court standards
5.12 Key papers for bankruptcy.	5.12 Student-produced documents, rated as mailable based on business/court standards
DUTY AREA 6. Preparing Litigation Documents	
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks.)	
6.1 Prepare requests for service of process.	6.1 Student-produced copy, rated with 100% accuracy based on instructor's guidelines
6.2 Key marriage agreements (i.e., pre- and post-nuptial).	6.2 Student-produced document, rated as mailable based on instructor/court standards
6.3 Prepare divorce decrees.	6.3 Student-produced document, rated as mailable based on instructor/court standards
6.4 Prepare property and settlement agreements.	6.4 Student-produced document, rated as mailable based on instructor/court standards
6.5 Key complaints.	6.5 Student-produced documents, rated as mailable based on business/court standards
6.6 Key summonses.	6.6 Student-produced documents, rated as mailable based on business/court standards
6.7 Key interrogatories.	6.7 Student-produced documents, rated as mailable based on business/court standards
6.8 Key subpoenas.	6.8 Student-produced documents, rated as mailable based on business/court standards
6.9 Key motions for judgment.	6.9 Student-produced documents, rated as mailable based on business/court standards

Competencies	Measures of Achievement
6.10 Key orders.	6.10 Student-produced documents, rated as mailable based on business/court standards
6.11 Key stipulations.	6.11 Student-produced documents, rated as mailable based on business/court standards
6.12 Key pleadings and discovery.	6.12 Student-produced documents, rated as mailable based on business/court standards
6.13 Key briefs.	6.13 Student-produced documents, rated as mailable based on business/court standards
6.14 Schedule and key depositions.	6.14 Student-produced schedule and documents, rated as mailable based on instructor/court standards
DUTY AREA 7. Identifying Legal and Business Ethics	
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks.)	
7.1 Identify procedures for maintaining confidentiality of client information.	7.1 Written or oral response to case studies, rated acceptable based on instructor/business guidelines
7.2 Identify the attitudes and work habits necessary for professional relations with customer and staff in a legal office.	7.2 Written or oral identification, rated acceptable based on instructor's guidelines
7.3 Identify issues related to electronic transfer of legal documents.	7.3 Written or oral identification, rated acceptable based on instructor/court guidelines
DUTY AREA 8. Enhancing Employability Skills	
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks. For additional employability tasks, see Duty Area 8 in Office Administration.)	
8.1 Identify the purposes and goals of the student organization.	8.1 Written or oral identification, rated acceptable according to instructor's guidelines
8.2 Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	8.2 Student demonstration, all items rated acceptable according to instructor's guidelines
8.3 Develop a career ladder of occupational opportunities in the legal field.	8.3 Written report containing research, documentation of interviews, goals, and strategies, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
8.4	Investigate certification options for legal office personnel.	8.4	Written or oral research report, rated acceptable based on instructor's guidelines
8.5	Update portfolio.	8.5	Student-assembled portfolio, rated acceptable based on business/industry standards
8.6	Participate in a mock interview for a legal position.	8.6	Role-play activity, rated acceptable based on instructor's rating form
8.7	Compose an interview follow-up letter.	8.7	Student-completed document, rated acceptable based on business/industry standards
8.8	Identify purposes and types of continuing education.	8.8	Written or oral report, rated acceptable based on instructor's guidelines
8.9	Apply for a promotion.	8.9	Student-produced document, rated acceptable based on industry standards
8.10	Identify the steps to follow in resigning from a position.	8.10	Written or oral identification, rated acceptable based on instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

History and Social Science

Grade 12

12.7 The student will analyze and compare national and state governments, with emphasis on
- the structures, functions, and authority of each;
- the principles of federalism, separation of powers, and checks and balances;
- the extent to which powers is shared rather than divided or separated; and
- procedures for constitutional amendment.

12.9 The student will identify and distinguish among the units of local governments in Virginia, including counties, cities, towns, and regional authorities and will analyze a local public issue.

Medical Systems Administration 6730
CIP Code: 52.0404
Grade Levels: 11, 12 (18, 36 weeks)
Prerequisites: Keyboarding Applications
Office Administration recommended

Description: Students completing Office Administration and wishing to gain employment in the medical field may take this course to learn how to use medical terminology and procedures useful in developing medical documents and functioning effectively in a medical office environment. When this course is offered as a daily multiple-period class, the competencies identified in Office Administration may be included.

Note: This task list contains competencies for a 36-week, single-period course. The list should be adjusted for an 18-week course. The task list does not contain tasks taught in Office Administration.

Competencies	Measures of Achievement
DUTY AREA 1. Conducting Customer Service Activities	
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in each of these tasks. For additional customer service tasks, see Duty Area 1 in Office Administration.)	
1.1 Interact with patients, staff, and visitors.	1.1 Role-play situations of instructor-provided case studies, rated acceptable based on instructor and peer evaluation forms
1.2 Determine appropriate procedures for handling medical emergencies.	1.2 Case study, rated acceptable on instructor-prepared checksheet
1.3 Complete a patient information record.	1.3 Student demonstration, all items on an instructor-prepared checklist rated acceptable
1.4 Determine incoming calls that must be immediately referred to a physician.	1.4 Role-play activity, student participation evaluated as acceptable based on instructor-prepared rating form
1.5 Maintain patient appointment book.	1.5 Student-completed activity, prepared in accordance with instructor's guidelines with 100% accuracy
1.6 Identify procedures for handling patient complaints.	1.6 Role-play activity, rated acceptable based on instructor-prepared rating form
1.7 Identify procedures for maintaining confidentiality of patient records and other information.	1.7 Student-completed activity, rated acceptable based on instructor's guidelines
1.8 Explain legal considerations related to patient confidentiality.	1.8 Student-completed activity, rated acceptable based on instructor's guidelines

Competencies	Measures of Achievement
1.9 Maintain waiting room.	1.9 Instructor-prepared worksheet, rated acceptable based on items on instructor-prepared checklist
DUTY AREA 2. Managing Office Activities	
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks. For additional office tasks, see Duty Areas 4 and 7 in Office Administration.)	
2.1 Schedule hospital admissions and physician referrals.	2.1 Student demonstration, all items rated acceptable based on instructor's guidelines (e.g., proofreading, correct placement, and accuracy)
2.2 Complete claim forms.	2.2 Student-completed forms, rated acceptable based on instructor's guidelines (e.g., proofreading, correct placement, and accuracy)
2.3 Record information from medical records.	2.3 Student demonstration, rated acceptable based on instructor's guidelines (e.g., proofreading, correct placement, and accuracy)
2.4 Record information found in the Current Procedural Terminology (CPT) and other medical references as related to the Superbill and insurance forms.	2.4 Student demonstration, all items on an instructor-prepared checklist rated acceptable
2.5 Supply abbreviations for frequently used medical terms and identify medical terms of frequently used abbreviations.	2.5 Instructor-prepared test, rated average or above
2.6 Demonstrate handling procedures for X-rays and other resources that warrant special care.	2.6 Role-play activity or student demonstration, student participation evaluated as acceptable on instructor-prepared rating form
DUTY AREA 3. Identifying Legal and Business Ethics	
3.1 Describe guidelines related to advertising.	3.1 Instructor-prepared list, rated average or above
3.2 Maintain OSHA manuals.	3.2 Instructor-prepared checklist, rated acceptable based on agency guidelines
3.3 Maintain personnel policy and procedures manual.	3.3 Student-prepared manual, evaluated as acceptable based on instructor-prepared rating form
3.4 Convey pertinent medical information communicated by patient.	3.4 Role-play activities, all items rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
3.5	Describe the ways risk management applies to a medical office.	3.5	Instructor-prepared test, rated average or above
3.6	Describe the importance of substance control.	3.6	Written or oral researched report, rated acceptable based on instructor's guidelines
DUTY AREA 4. Managing Financial Functions			
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks. For additional finance tasks, see Duty Areas 2, 3, and 7 in Office Administration.)			
4.1	Maintain patient accounts.	4.1	Student-completed activity, information completed with 100% accuracy
4.2	Prepare statements to patients.	4.2	Student-prepared statements, completed and totals entered with 100% accuracy according to instructor's guidelines
DUTY AREA 5. Enhancing Employability Skills			
(Information processing skills found in Duty Area 5 of Office Administration should be incorporated as needed in teaching these tasks. Also, see Duty Area 8 in Office Administration for additional employability skills.)			
5.1	Identify the purposes and goals of the student organization.	5.1	Written or oral identification, rated acceptable according to instructor's guidelines
5.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts.)	5.2	Student demonstration, all items rated acceptable according to instructor's guidelines
5.3	Identify personal interests, aptitudes, and attitudes related to the qualities found in successful medical office personnel.	5.3	Student-completed inventory, evaluated as acceptable based on instructor-prepared evaluation form
5.4	Develop a career ladder of occupational opportunities in the medical office and related fields.	5.4	Written report, containing research, documentation of interviews, goals, and strategies, rated acceptable based on instructor's guidelines
5.5	Update portfolio.	5.5	Student-produced folders, rated acceptable based on instructor's checklist, including resume, cover letter, and student production samples
5.6	Participate in a mock interview for a medical office position.	5.6	Role-play activity, rated acceptable based on industry standards
5.7	Compose an interview follow-up letter.	5.7	Student-produced letter, rated acceptable based on industry standards

Competencies		Measures of Achievement	
5.8	Identify the purposes and types of continuing education.	5.8	Written or oral report, rated acceptable based on instructor's guidelines
5.9	Apply for a promotion.	5.9	Student-produced document, rated acceptable according to business standards
5.10	Identify the steps to follow in resigning from a position.	5.10	Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

Notetaking 6241
CIP Code: 52.0401
Grade Levels 9, 10, 11, 12 (18/36 weeks)
Prerequisite: Keyboarding recommended

Description: Students learn an easy, abbreviated writing system of notetaking that enables them to take and transcribe notes for educational, business, or personal use. Students explore reasons for taking notes, ways to listen effectively, and strategies for improving communication and study skills for academic success.

Note: This list contains competencies for a 36-week course. Competencies should be adjusted for courses of shorter duration.

Competencies		Measures of Achievement	
DUTY AREA 1. Using Abbreviated Writing Systems			
1.1	Develop writing principles of an abbreviated writing system.	1.1	Instructor-provided tests, rated average or above
1.2	Read text from an abbreviated writing system.	1.2	Student demonstration, rated acceptable based on instructor's guidelines
1.3	Build speed on familiar and unfamiliar dictation materials.	1.3	Instructor-dictated tests and/or recorded media, rated average or above for speed based on instructor's guidelines
1.4	Transcribe notes into usable copy.	1.4	Student-produced written transcript, rated average or above based on instructor's criteria for production work
1.5	Proofread documents for spelling, punctuation, capitalization, number usage, accuracy of content, and clarity of expression.	1.5	Student-produced documents, rated acceptable based on instructor's criteria
1.6	Refine listening skills.	1.6	Role-play activity, rated acceptable based on instructor's checklist
1.7	Illustrate practical applications of notetaking skills.	1.7	Student-produced notes (on printed material, textbooks, lectures, meetings, telephone calls, movies, tapes), rated average or above for completeness based on instructor's guidelines
DUTY AREA 2. Refining Study Skills			
2.1	Analyze reading materials for the purpose of research.	2.1	Student-produced reference cards, note cards, and outline, rated average or above based on instructor's criteria

Competencies		Measures of Achievement	
2.2	Organize notes and original thoughts into research presentation.	2.2	Written or oral research presentation, rated average or above based on instructor-prepared checklist
2.3	Identify individual learning style(s).	2.3	Instructor or counselor-administered inventory, completed in accordance with guidelines
2.4	Analyze personal time management.	2.4	Student-produced time log recording daily behaviors and student-produced journal to account for use of time, rated acceptable based on instructor's guidelines
2.5	Apply techniques to enhance time management.	2.5	Student-produced time management plan, rated acceptable based on instructor's guidelines
2.6	Organize study materials (notes, handouts, tests, etc.).	2.6	Student-maintained notebook and folder, rated average or above based on instructor-prepared checklist
2.7	Demonstrate skill in test preparation.	2.7	Instructor-prepared worksheets or activities on test-taking strategies, rated average or above based on criteria specified in instructor's guidelines
2.8	Demonstrate skill in test-taking techniques.	2.8	Instructor-prepared pre- and post-test, rated average or above based on instructor's guidelines
DUTY AREA 3. Developing Employability Skills			
3.1	Identify the purposes and goals of the student organization.	3.1	Written or oral identification, rated acceptable according to instructor's guidelines
3.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	3.2	Student demonstration, rated acceptable according to instructor's guidelines
3.3	Update resume.	3.3	Student-produced resume, rated acceptable based on industry standards
3.4	Complete a job application form.	3.4	Student-completed form, rated acceptable based on industry standards
3.5	Demonstrate successful interviewing techniques.	3.5	Student demonstration and analysis, rated acceptable according to industry standards
3.6	Compose an interview follow-up letter.	3.6	Student-produced document, rated acceptable according to industry standards

Competencies	Measures of Achievement
3.7 Update portfolio.	3.7 Student-assembled portfolio, rated acceptable based on instructor's guidelines
3.8 Apply for promotion.	3.8 Student-produced document, rated acceptable according to industry standards
3.9 Identify the steps to follow in resigning from a position.	3.9 Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 9

9.2 The student will make planned oral presentations.
- Include definitions to increase clarity.
- Use relevant details to support main ideas.
- Illustrate main ideas through anecdotes and examples.
- Cite information sources.
- Make impromptu responses to questions about presentation.

9.4 The student will read and analyze a variety of print materials.
- Identify a hypothesis to be confirmed, disproved, or modified.
- Evaluate clarity and accuracy of information.
- Synthesize information from sources and apply it in written and oral presentations.
- Identify questions not answered by a selected text.
- Extend general and specialized vocabulary through reading and writing.
- Read and follow instructions to use computer software, assemble or construct models or equipment, or complete a project.

9.6 The student will develop narrative, literary, expository, and technical writings to inform, explain, analyze, or entertain.
- Plan and organize writing.
- Communicate clearly the purpose of the writing.
- Write clear, varied sentences.
- Use specific vocabulary and information.
- Arrange paragraphs into a logical progression.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

9.7 The student will credit the sources of both quoted and paraphrased ideas.
- Define the meaning and consequences of plagiarism.
- Distinguish one's own ideas from information created or discovered by others.
- Use a style sheet method for citing secondary sources, such as MLA or APA.

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.2 The student will critique oral reports of small-group learning activities.
- Evaluate one's own role in preparation and delivery of oral reports.
- Evaluate effectiveness of group process in preparation and delivery of oral reports.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Office Administration 6621
CIP Code: 52.0401
Grade Levels: 10, 11, 12 (18, 36 weeks)
Prerequisites: Keyboarding
Keyboarding Applications Recommended

Description:	Students enhance word processing and communication skills as they develop competencies needed by administrative support professionals. Students study office procedures such as machine dictation/transcription, telecommunications, electronic records managment, and financial records management.
Note:	This list contains competencies for a 36-week course. The list should be adjusted for an 18-week course.

Competencies		Measures of Achievement	
DUTY AREA 1. Developing Communication Skills			
1.1	Provide support and service to customers/clients.	1.1	Role-play activity, student participation evaluated as acceptable on instructor-prepared rating form
1.2	Place/receive telephone calls (including conference calls).	1.2	Student demonstration, all items on an instructor-prepared checklist rated acceptable
1.3	Prepare written telephone messages.	1.3	Simulated activity, rated acceptable according to business/industry standards
1.4	Process incoming/out-going mail.	1.4	Student demonstration, rated acceptable based on instructor's guidelines
1.5	Transmit and receive information using electronic communications (e-mail, fax, etc.).	1.5	Student demonstration, rated acceptable according to instructor's guidelines
1.6	Compose business correspondence.	1.6	Student-produced letters and other documents, rated acceptable according to industry standards
1.7	Prepare camera-ready copy.	1.7	Student demonstration, rated acceptable according to industry standards
1.8	Reproduce and distribute documents and information.	1.8	Student demonstration, rated acceptable according to instructor's guidelines
1.9	Create and maintain effective and productive work relationships.	1.9	Student demonstration, evaluated as acceptable according to industry standards
1.10	Identify emerging telecommunications concepts.	1.10	Instructor-prepared test, average or above rating

Competencies		Measures of Achievement	
DUTY AREA 2. Maintaining Office Systems			
2.1	Prepare and maintain an inventory records of hardware, software, furniture, equipment, and supplies.	2.1	Student-produced inventory, rated acceptable based on instructor's guidelines
2.2	Conduct a needs assessment.	2.2	Written or oral report, rated acceptable based on instructor's guidelines
2.3	Prepare a cost analysis.	2.3	Written or oral report, rated acceptable based on instructor's guidelines
2.4	Maintain personal computer/network.	2.4	Ongoing student demonstration, rated acceptable based on instructor's rating form
2.5	Maintain printer (e.g., load paper, clean printer, change cartridge, change printwheel).	2.5	Ongoing student demonstration, rated acceptable on instructor's rating form
2.6	Maintain copier (e.g., add toner, load paper, clear paper path, clean glass).	2.6	Ongoing student demonstration, rated acceptable on instructor's rating form
2.7	Maintain fax machine (e.g., load paper, change cartridge).	2.7	Ongoing student demonstration, rated acceptable on instructor's rating form
2.8	Receive office equipment and supplies.	2.8	Simulated activity, rated acceptable based on instructor's guidelines
DUTY AREA 3. Managing Financial Functions			
3.1	Manage cash fund accounts (petty cash and cash advance).	3.1	Student-completed activity, calculations completed with 100% accuracy
3.2	Prepare payroll records.	3.2	Student-produced records, rated acceptable based on instructor's guidelines
3.3	Prepare and post check records.	3.3	Student-produced records, rated acceptable based on instructor's guidelines
3.4	Prepare bank deposits.	3.4	Student-prepared deposits, completed with 100% accuracy based on instructor's guidelines
3.5	Determine budgetary requirements for office supplies and equipment.	3.5	Simulated activity, rated acceptable based on instructor's guidelines
3.6	Monitor office budget.	3.6	Simulated activity, rated acceptable based on instructor's guidelines
3.7	Complete purchase requisitions.	3.7	Student-produced screen or hard copy, all items on instructor-prepared checklist rated acceptable
3.8	Complete vouchers for payment.	3.8	Student-produced screen or hard copy, all items on instructor-prepared checklist rated acceptable

Competencies		Measures of Achievement	
3.9	Identify various collection procedures.	3.9	Written or oral identification, rated acceptable based on instructor's guidelines
3.10	Reconcile financial statements.	3.10	Simulated activity, 100% accuracy
3.11	Maintain records for billing (e.g., telephone calls, fax transmissions, photocopies).	3.11	Simulated activity, rated acceptable based on instructor's guidelines
DUTY AREA 4. Managing Information			
4.1	Maintain a professional reading file.	4.1	Student-assembled file, rated acceptable based on instructor's guidelines
4.2	Maintain alphabetical filing system.	4.2	Student-completed activity, rated acceptable based on industry standards
4.3	Maintain subject filing system.	4.3	Simulated activity, rated acceptable based on industry standards
4.4	Maintain numerical filing system.	4.4	Simulated activity, rated acceptable based on industry standards
4.5	Maintain chronological file system.	4.5	Simulated activity, rated acceptable based on industry standards
4.6	Maintain tickler file.	4.6	Simulated activity, rated acceptable based on industry standards
4.7	Retrieve information from files.	4.7	Simulated activity, rated acceptable based on industry standards
4.8	Maintain file of addresses and telephone numbers.	4.8	Student-produced file, rated acceptable based on instructor's guidelines
4.9	Establish and maintain document and information storage and retrieval system.	4.9	Student-produced system, rated acceptable based on instructor's guidelines
DUTY AREA 5. Processing Information and Data			
5.1	Key documents (e.g., agendas, correspondence with variable inserts, statistical documents).	5.1	Student-produced screen or printed copy, rated as mailable based on industry standards
5.2	Use touch system of entry on calculators and 10-key pads.	5.2	Student demonstration, rated acceptable on instructor-prepared checklist
5.3	Transcribe dictation from recorded media (e.g., minutes of meetings, correspondence, reports).	5.3	Student-produced screen or printed copy, rated as mailable based on industry standards
5.4	Dictate notes and correspondence.	5.4	Student-produced tapes, rated acceptable based on instructor's guidelines
5.5	Enhance formatting of documents.	5.5	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
5.6	Create and format tables.	5.6	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.7	Scan and connect document to text and verify conversion.	5.7	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.8	Create basic macros.	5.8	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.9	Search/replace data.	5.9	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.10	Merge text.	5.10	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.11	Sort word processing data.	5.11	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.12	Convert document from one operating system to another.	5.12	Student demonstration, rated acceptable based on instructor's guidelines
5.13	Create a spreadsheet.	5.13	Student-produced spreadsheet, rated acceptable based on instructor's guidelines
5.14	Edit a spreadsheet.	5.14	Student-produced screen or printed copy and edited copy, rated acceptable based on instructor's guidelines
5.15	Enhance a spreadsheet by using formatting features (e.g., column width, justification, values).	5.15	Student-produced screen or printed copy, rated acceptable based on instructor's guidelines
5.16	Create a database (for example FBLA, class, departmental rosters).	5.16	Student-produced database, rated acceptable based on instructor's guidelines
5.17	Edit a database.	5.17	Student-produced copy of original database and edited database, rated acceptable based on instructor's guidelines
5.18	Create queries.	5.18	Student-produced queries, rated acceptable based on instructor's guidelines
5.19	Generate report.	5.19	Student-produced report, rated acceptable based on instructor's guidelines
5.20	Integrate database, spreadsheet, and word processing files.	5.20	Student-produced integrated file, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
DUTY AREA 6. Organizing and Planning Functions			
6.1	Demonstrate time management skills.	6.1	Student-completed ongoing activities, rated acceptable based on instructor's guidelines
6.2	Monitor work loads.	6.2	Student demonstration, rated acceptable based on criteria specified in instructor's guidelines
6.3	Determine most cost-effective process for reproduction of printed material.	6.3	Written or oral justification, rated acceptable based on criteria specified by the instructor
6.4	Maintain supervisor's appointment calendar and schedules.	6.4	Simulated activity, rated acceptable based on instructor's guidelines
6.5	Coordinate travel arrangements for supervisor (e.g., reservations, itinerary).	6.5	Case study, rated acceptable according to instructor's guidelines
6.6	Coordinate meetings, events, and activities.	6.6	Simulated activity, rated acceptable according to instructor's guidelines
6.7	Recommend improvements in physical layout of the office.	6.7	Written or oral report, rated acceptable according to instructor's guidelines
6.8	Give written/oral directions (e.g., geographic locations, equipment operation, completion of office tasks).	6.8	Written or oral directions, rated acceptable based on instructor's guidelines
6.9	Follow written/oral directions.	6.9	Student-completed activity, rated acceptable based on instructor's guidelines
DUTY AREA 7. Supervising Employees			
7.1	Develop work processes and procedures.	7.1	Simulated activity, rated acceptable based on instructor's guidelines
7.2	Develop techniques for introducing and implementing changes (to include changes in staffing, equipment, and routine procedures).	7.2	Case studies, rated acceptable based on instructor's guidelines
7.3	Coordinate administrative support staff work schedule and workload distribution.	7.3	Student-completed activity, rated acceptable based on instructor's guidelines
7.4	Provide feedback to teams and individuals.	7.4	Student demonstration, rated acceptable based on instructor's guidelines
7.5	Maintain employee records.	7.5	Student-completed records, rated acceptable based on instructor's guidelines
7.6	Update policy and procedures manual.	7.6	Student-completed simulation, rated acceptable based on instructor's guidelines
7.7	Coordinate mailing systems (including alternative delivery services).	7.7	Student-completed activity, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
7.8	Maintain production records.	7.8	Student-completed records, rated acceptable based on instructor's guidelines
7.9	Manage preventive maintenance and repair of equipment.	7.9	Student-completed activity, rated acceptable based on instructor's guidelines
7.10	Contribute to development of job descriptions for administrative support staff.	7.10	Student-produced job descriptions, rated acceptable based on instructor's guidelines
7.11	Participate in employee performance evaluation.	7.11	Student role-play, rated acceptable based on instructor's guidelines
7.12	Serve on interview panel for administrative support staff applications.	7.12	Student role-play, rated acceptable based on instructor's guidelines
7.13	Orient new administrative support staff employees.	7.13	Student role-play, rated acceptable based on instructor's guidelines
7.14	Recommend administrative support staff training programs.	7.14	Written and oral research report, rated acceptable based on instructor's guidelines
DUTY AREA 8. Developing Employability Skills			
8.1	Identify the purposes and goals of the student organization.	8.1	Written or oral identification, rated acceptable according to instructor's guidelines
8.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	8.2	Student demonstration, all items rated acceptable according to instructor's guidelines
8.3	Develop a career plan.	8.3	Written research report, rated acceptable based on instructor's guidelines
8.4	Update resume.	8.4	Student-produced resume, rated acceptable based on industry standards
8.5	Complete a job application form.	8.5	Student-completed form, rated acceptable based on industry standards
8.6	Demonstrate successful interviewing techniques.	8.6	Student demonstration and analysis, rated acceptable according to industry standards
8.7	Compose an interview follow-up letter.	8.7	Student-produced document, rated acceptable according to industry standards
8.8	Update portfolio.	8.8	Student-assembled portfolio, rated acceptable based on instructor's guidelines

Competencies	Measures of Achievement
8.9 Apply for promotion.	8.9 Student-produced document, rated acceptable according to industry standards
8.10 Identify the steps to follow in resigning from a position.	8.10 Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.2 The student will critique oral reports of small-group learning activities.
- Evaluate one's own role in preparation and delivery of oral reports.
- Evaluate effectiveness of group process in preparation and delivery of oral reports.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.
- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.8 The student will critique professional and peer writing.
- Analyze the writing of others.
- Describe how writing accomplishes its intended purpose.
- Suggest how writing might be improved.
- Apply knowledge of critical analysis to writing.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.2 The student will analyze and evaluate persuasive presentations.
- Critique the accuracy, relevance, and organization of evidence.
- Critique the clarity and effectiveness of delivery.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.
- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.2 The student will evaluate formal presentations.
- Critique relationships among purpose, audience, and content of presentations.
- Critique effectiveness of presentations.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.

- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Algebra I

A.2 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables. Students will choose an appropriate computational technique, such as mental mathematics, calculator, or paper and pencil.

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.11 The student will describe the way the computer stores, accesses, and processes variables, including the following topics: the use of variables versus constants, variables addresses, pointers, parameter passing, scope of variables, and local versus global variables. This will also include use of terminology, including memory, CPU, RAM, ROM, baud, byte, bits, floppy disc, and hard drive.

COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure.

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

Word Processing 6625
CIP Code: 52.0407
Grades 9, 10, 11, 12 (18, 36 weeks)
Prerequisite: Keyboarding*
*Keyboarding courses or teacher-approved demonstrated touch keyboarding skills

Description:	Students develop intermediate to advanced level word processing skills using a variety of software functions, including graphics and desktop publishing. Students gain competence integrating other applications such as database and spreadsheet into word processing activities. Classroom experiences also provide for skill development in communication.
Note:	This list contains competencies for a 36-week course. The list should be adjusted for courses of shorter duration.

Competencies		Measures of Achievement	
DUTY AREA 1. Handling Systems Operations Procedures			
1.1	Identify advanced computer system components.	1.1	Instructor-prepared worksheet, identifications completed according to instructions
1.2	Load, access, and exit operating system and software.	1.2	Student demonstration, all items rated acceptable on instructor-prepared checklist
1.3	Use file and disk management procedures such as deleting, copying, backing up files, and formatting disks.	1.3	Student-produced printed file directory, printout rated acceptable based on instructor's guidelines
1.4	Care for storage media and computer.	1.4	Student demonstration, rated acceptable based on instructor's written criteria
DUTY AREA 2. Creating, Formatting, and Editing Documents			
2.1	Produce complex business documents (e.g., text with tables, graphs, graphics, and/or documented material).	2.1	Student-produced documents, rated acceptable based on instructor's guidelines
2.2	Proofread (manually and electronically) complex business documents.	2.2	Student-produced documents, rated acceptable based on instructor's guidelines
2.3	Create documents representing a variety of formats such as letters, reports, tables, and memos.	2.3	Student-produced mailable copy, rated acceptable based on instructor's guidelines
2.4	Analyze and refine complex business documents (i.e., using editing techniques, grammar-check, and thesaurus).	2.4	Student-refined documents, rated acceptable based on instructor's guidelines

Competencies	Measures of Achievement
2.5 Insert, delete, move, and copy text and data.	2.5 Student demonstration and printed copy, all items evaluated as acceptable on an instructor's checklist
2.6 Troubleshoot a word processing problem by obtaining assistance from help screens and printed manuals.	2.6 Problem-solving exercise, solution rated acceptable according to instructor's stated criteria
2.7 Customize word processing software defaults.	2.7 Student-produced documents, rated acceptable according to instructor's guidelines
DUTY AREA 3. Using Specialized Word Processing Features	
3.1 Create and execute macros.	3.1 Student demonstration, rated acceptable based on instructor's guidelines
3.2 Sort data in ascending and descending order.	3.2 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
3.3 Sort data in multiple fields.	3.3 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
3.4 Create a primary file by merging variable information keyed at the keyboard.	3.4 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
3.5 Merge a primary file with a secondary file.	3.5 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
3.6 Create a boilerplate to assemble a document.	3.6 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
3.7 Complete on-screen forms.	3.7 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
3.8 Integrate spreadsheet, database, and word processing applications.	3.8 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
DUTY AREA 4. Using Desktop Publishing Features	
4.1 Apply principles of graphic layout and design.	4.1 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
4.2 Apply principles of typography (type styles and sizes).	4.2 Student-produced screen or printed copy, rated acceptable according to instructor's rating scale

Competencies		Measures of Achievement	
4.3	Create documents in varying columnar formats.	4.3	Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
4.4	Design complex tables.	4.4	Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
4.5	Import graphics within text.	4.5	Student-produced screen or printed copy, rated acceptable according to instructor's rating scale
DUTY AREA 5. Communicating Electronically			
5.1.	Explain the components of a Local Area Network (LAN).	5.1	Written or oral report, all items on instructor-prepared checklist rated acceptable
5.2	Explain various telecommunications components and their functions.	5.2	Student presentation, all items on instructor-prepared checklist rated acceptable
5.3	Demonstrate use of electronic mail.	5.3	Student-transmitted message and response to a reply, all items on instructor-prepared checklist rated acceptable
5.4	Transmit documents using a fax modem.	5.4	Student-transmitted document, verification of receipt by addressee
5.5	Access data from electronic bulletin boards, news groups, home pages, and other online resources.	5.5	Student-accessed screen or printout, rated acceptable according to instructor's guidelines
5.6	Upload and download electronic data.	5.6	Student-produced screen and hard copy, all items on instructor-prepared checklist rated acceptable
5.7	Identify emerging trends in word processing.	5.7	Written or oral research report, rated acceptable according to instructor's guidelines
DUTY AREA 6. Preparing for Employment			
6.1	Identify the purposes and goals of the student organization.	6.1	Written or oral identification, rated acceptable according to instructor's guidelines
6.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	6.2	Student demonstration, all items rated acceptable according to instructor's guidelines
6.3	Explore career options.	6.3	Written and oral research report, rated acceptable based on instructor's guidelines

Competencies		Measures of Achievement	
6.4	Investigate sources of potential employment.	6.4	Written and oral report, rated acceptable based on instructor's guidelines
6.5	Compose a letter of application.	6.5	Student-produced letter, rated acceptable based on industry standards
6.6	Create or update a resume.	6.6	Student-produced resume, rated acceptable based on industry standards
6.7	Complete an application.	6.7	Student-completed application, rated acceptable based on industry standards
6.8	Demonstrate interview techniques.	6.8	Role-play activity, student participation rated acceptable based on industry standards
6.9	Compose an interview follow-up letter.	6.9	Student-produced letter, rated acceptable based on industry standards
6.10	Apply for promotion.	6.10	Student-produced document, rated acceptable according to industry standards
6.11	Identify the steps to follow in resigning from a position.	6.11	Written or oral identification, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 9

9.2 The student will make planned oral presentations.
- Include definitions to increase clarity.
- Use relevant details to support main ideas.
- Illustrate main ideas through anecdotes and examples.
- Cite information sources.
- Make impromptu responses to questions about presentation.

9.4 The student will read and analyze a variety of print materials.
- Identify a hypothesis to be confirmed, disproved, or modified.
- Evaluate clarity and accuracy of information.
- Synthesize information from sources and apply it in written and oral presentations.
- Identify questions not answered by a selected text.
- Extend general and specialized vocabulary through reading and writing.
- Read and follow instructions to use computer software, assemble or construct models or equipment, or complete a project.

9.6 The student will develop narrative, literary, expository, and technical writings to inform, explain, analyze, or entertain.
- Plan and organize writing.
- Communicate clearly the purpose of the writing.
- Write clear, varied sentences.
- Use specific vocabulary and information.
- Arrange paragraphs into a logical progression.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

9.7 The student will credit the sources of both quoted and paraphrased ideas.
- Define the meaning and consequences of plagiarism.
- Distinguish one's own ideas from information created or discovered by others.
- Use a style sheet method for citing secondary sources, such as MLA or APA.

Grade 10

10.1 The student will participate in and report small-group learning activities.
- Assume responsibility for specific tasks.
- Participate in the preparation of an outline or summary of the group activity.
- Include all group members in oral presentation.

10.2 The student will critique oral reports of small-group learning activities.
- Evaluate one's own role in preparation and delivery of oral reports.
- Evaluate effectiveness of group process in preparation and delivery of oral reports.

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.9 The student will analyze, evaluate, synthesize, and organize information from a variety of sources into a documented paper dealing with a question, problem, or issue.
- Narrow a topic.
- Develop a plan for research.

- Collect information to support a thesis.
- Evaluate quality and accuracy of information.
- Synthesize information in a logical sequence.
- Document sources of information using a style sheet format, such as MLA or APA.
- Revise writing for clarity of content.
- Edit final copy for correct use of language, format, spelling, punctuation, and capitalization.
- Use available technology.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

12.8 The student will write documented research papers.
- Evaluate the accuracy and usefulness of information.
- Synthesize information to support the thesis.
- Present information in a logical manner.

Algebra I

A.4 The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.

Geometry

G.2 The student will use pictorial representations, including computer software and coordinate methods to solve problems involving symmetry and transformation. This will include
- using formulas for finding distance, midpoint, and slope;
- investigating and determining whether a figure is symmetric with respect to a line or a point; and
- determining whether a figure has been translated, reflected, or rotated.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.11 The student will describe the way the computer stores, accesses and processes variables, including the following topics: the use of variables versus constants, variables addresses,

pointers, parameter passing, scope of variables, and local versus global variables. This will also include use of terminology, including memory, CPU, RAM, ROM, baud, byte, bits, floppy disc, and hard drive.

COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure.

COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and animation routines.

COM.22 The student will solve practical consumer problems that involve analyzing and interpreting graphs, charts, and/or tables.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

COM.24 The student will solve probability, data analysis, and statistical problems.

Special Programs

Office Specialist I, II, III, and IV

Business Individualized Program

Office Specialist I 6740
(Targeted Populations)
CIP Code: 52.0408
Grades 9, 10, 11, 12 (36 weeks)
Prerequisite: None

Description: Students complete the Office Specialist sequence identified locally or progress in the sequence until prepared to transfer into other business courses. Students develop skills in areas including keyboarding, word processing, office procedures, and records management.

Competencies		Measures of Achievement	
DUTY AREA 1. Developing Word Processing Skills			
1.1	Identify computer system components used in word processing.	1.1	Written or oral identification, rated acceptable according to instructor's guidelines
1.2	Boot, access, and exit operating system and software.	1.2	Student demonstration, all items on an instructor-prepared checklist rated acceptable
1.3	Key alphabetic, numeric, and symbol information using a touch system and correct techniques.	1.3	Student demonstration, all items on an instructor-prepared technique sheet rated acceptable
1.4	Manipulate data/software/operating system using function keys, icons, touch screens, bars, and pull-down menus.	1.4	Student demonstration, all items on an instructor-prepared checklist rated acceptable
1.5	Use file and disk management techniques such as store and retrieve.	1.5	Student-produced screen or hard copy, all items on instructor-prepared checklist rated acceptable
1.6	Improve keyboarding techniques by practicing drills and applications.	1.6	Student demonstration, rated acceptable on an instructor-prepared technique chart
1.7	Increase keyboarding speed by practicing drills and applications.	1.7	Student-maintained record or line graphs of timed writings, rated acceptable based on instructor's guidelines
1.8	Increase level of accuracy by practicing keyboarding drills and applications.	1.8	Student-produced work, rated acceptable based on accuracy and time guidelines
1.9	Proofread copy for accuracy, content, grammar, spelling, and punctuation.	1.9	Errors on instructor-prepared document identified and marked with 100% accuracy

Competencies		Measures of Achievement	
1.10	Produce nontechnical documents.	1.10	Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor
1.11	Revise and edit nontechnical documents.	1.11	Student-produced copy from rough-draft material, error free
1.12	Maintain work station, equipment, materials, and supplies.	1.12	Ongoing evaluation through instructor observation, documented on instructor-prepared checklist
1.13	Key addresses on envelopes.	1.13	Student-produced envelopes, rated acceptable according to instructor-provided criteria
1.14	Format and key columns and tables.	1.14	Student-produced document, rated acceptable according to instructor-prepared guidelines
1.15	Format and key a letter, memo, and report from rough-draft material.	1.15	Student-produced document, rated acceptable according to instructor-prepared guidelines
DUTY AREA 2. Developing Mathematics Skills			
2.1	Operate calculator using the touch method.	2.1	Student demonstration, rated acceptable based on criteria specified in instructor's guidelines
2.2	Develop speed in keying numbers.	2.2	Timed writings, rated acceptable according to school system's standards
2.3	Solve addition, subtraction, multiplication, and division problems.	2.3	Instructor-provided worksheet, rated acceptable according to school system's standards
2.4	Convert fractions to decimals.	2.4	Instructor-prepared worksheet, rated acceptable according to school system's standards
2.5	Convert decimals to percents and percents to decimals.	2.5	Instructor-prepared worksheet, rated acceptable according to school system's standards
2.6	Round off whole numbers and decimals.	2.6	Instructor-prepared worksheet, rated acceptable according to school system's standards
2.7	Calculate sales tax.	2.7	Instructor-prepared worksheet, rated acceptable according to school system's standards

Competencies		Measures of Achievement	
DUTY AREA 3. Keeping Financial Records			
3.1	Write numbers and letters legibly.	3.1	Ongoing evaluation of student-produced work, rated acceptable based on instructor's guidelines
3.2	Verify data.	3.2	Simulated activity, rated acceptable according to instructor's guidelines
3.3	Sort data.	3.3	Simulated activity, rated acceptable according to instructor's guidelines
3.4	Organize data on forms.	3.4	Simulated activity, rated acceptable according to instructor's guidelines
3.5	Prepare cash receipts records	3.5	Simulated activity, rated acceptable according to instructor's guidelines
3.6	Prepare petty cash records.	3.6	Simulated activity, rated acceptable according to instructor's guidelines
3.7	Prepare records for sales clerk.	3.7	Simulated activity, rated acceptable according to instructor's guidelines
3.8	Make change.	3.8	Student demonstration, change made with 100% accuracy
3.9	Prepare records for retail sales.	3.9	Simulated activity, rated acceptable according to instructor's guidelines
DUTY AREA 4. Photocopying Documents			
4.1	Make photocopy.	4.1	Student demonstration, copy rated acceptable on instructor-prepared rating form
4.2	Make enlargements and reduction of original.	4.2	Student demonstration, copy rated acceptable on instructor-prepared rating form
DUTY AREA 5. Managing Records			
5.1	File personal and business names using ARMA rules.	5.1	Instructor-prepared test, rated acceptable based on school system standards
5.2	Index, code, sort, and file personal and business names alphabetically.	5.2	Simulated activity, rated acceptable based on instructor-prepared guidelines

Competencies		Measures of Achievement	
DUTY AREA 6. Developing Communication Skills			
6.1	Make introductions.	6.1	Student demonstration, all items on an instructor-prepared checklist rated acceptable
6.2	Incorporate business terms in written and oral communication.	6.2	Individual or group activity, rated acceptable according to instructor's guidelines
6.3	Solve workplace problems.	6.3	Group analysis of case studies, rated acceptable according to instructor's guidelines
DUTY AREA 7. Preparing for Employment			
7.1	Identify the purposes and goals of the student organization.	7.1	Written or oral identification, rated acceptable according to instructor's guidelines
7.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	7.2	Student demonstration, all items rated acceptable according to instructor's guidelines
7.3	Explore business careers.	7.3	Written or oral research report, rated acceptable based on instructor's guidelines
7.4	Prepare a resume.	7.4	Student-produced document, all items rated acceptable on an instructor-prepared checklist
7.5	Demonstrate job interview skills.	7.5	Role-play activity, student participation evaluated as acceptable on instructor-prepared rating form

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 9

9.2 The student will make planned oral presentations.
- Include definitions to increase clarity.
- Use relevant details to support main ideas.
- Illustrate main ideas through anecdotes and examples.
- Cite information sources.
- Make impromptu responses to questions about presentation.

9.4 The student will read and analyze a variety of print materials.
- Identify a hypothesis to be confirmed, disproved, or modified.
- Evaluate clarity and accuracy of information.
- Synthesize information from sources and apply it in written and oral presentations.
- Identify questions not answered by a selected text.
- Extend general and specialized vocabulary through reading and writing.
- Read and follow instructions to use computer software, assemble or construct models or equipment, or complete a project.

9.6 The student will develop narrative, literary, expository, and technical writings to inform, explain, analyze, or entertain.
- Plan and organize writing.
- Communicate clearly the purpose of the writing.
- Write clear, varied sentences.
- Use specific vocabulary and information.
- Arrange paragraphs into a logical progression.
- Revise writing for clarity.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

Grade 10

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.
- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

Office Specialist II 6741
(Targeted Populations)
CIP Code: 52.0408
Grades 10, 11, 12 (36 weeks)
Prerequisite: None

Description: Students complete the Office Specialist sequence identified locally or progress in the sequence until prepared to transfer into other business courses. Students continue skill development and enhancement in the areas of keyboarding, word processing, office procedures, and records management.

Competencies		Measures of Achievement	
DUTY AREA 1. Enhancing Word Processing Skills			
1.1	Review and improve keyboarding techniques by practicing drills and applications.	1.1	Student demonstration, rated acceptable on an instructor-prepared technique chart
1.2	Increase keyboarding speed by practicing drills and applications.	1.2	Student-maintained record or line graph of timed writings, rated acceptable based on instructor's guidelines
1.3	Increase level of accuracy by practicing keyboarding drills and applications.	1.3	Student-produced work, rated acceptable based on accuracy and time guidelines
1.4	Proofread copy for accuracy, content, grammar, spelling, and accuracy.	1.4	Errors on instructor-prepared document identified and marked with 100% accuracy
1.5	Produce nontechnical documents.	1.5	Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor
1.6	Produce technical documents.	1.6	Student-produced document, rated acceptable according to formatting, accuracy, and time guidelines specified by the instructor
1.7	Revise, edit, and spell-check documents.	1.7	Student-produced copy from rough-draft material, error free
1.8	Format and key columns and tables.	1.8	Student-produced document, rated acceptable according to instructor-prepared guidelines
1.9	Format and key letters, memos, and reports.	1.9	Student-produced document, rated acceptable according to instructor-prepared guidelines

Competencies		Measures of Achievement	
1.10	Compose, format, and key research-related documents.	1.10	Student-produced research document, rated acceptable according to instructor-prepared guidelines
1.11	Produce forms (applications, invoices, purchase orders, purchase invoices, checks, credit memos, labels).	1.11	Student-produced document, rated acceptable according to instructor-prepared guidelines
1.12	Produce form letters.	1.12	Student-produced document, rated acceptable according to instructor-prepared guidelines
1.13	Enhance layout of documents by using features such as leader tabs, shading, lines, and graphics.	1.13	Student-produced document, rated acceptable according to instructor-prepared guidelines and peer evaluation
1.14	Edit documents using the block functions–move, copy, and delete.	1.14	Student-produced document, rated acceptable according to instructor-prepared guidelines
DUTY AREA 2. Keeping Records			
2.1	Maintain a checkbook.	2.1	Student simulation, all records completed according to instructor's guidelines
2.2	Reconcile a bank statement.	2.2	Student simulation, all records completed according to instructor's guidelines
2.3	Figure payroll deductions.	2.3	Student simulation, all records completed according to instructor's guidelines
2.4	Compute gross and net wages.	2.4	Student simulation, all records completed according to instructor's guidelines
2.5	Maintain records for retail sales.	2.5	Student simulation, all records completed according to instructor's guidelines
DUTY AREA 3. Photocopying Documents			
3.1	Prepare two-sided photocopies.	3.1	Student demonstration, rated acceptable on instructor-prepared rating form
3.2	Add paper to the photocopier.	3.2	Student demonstration, rated acceptable on instructor-prepared rating form
3.3	Make photocopies using cut and paste method.	3.3	Student demonstration, rated acceptable on instructor-prepared rating form
3.4	Collate and staple multiple-page documents.	3.4	Student demonstration, rated acceptable on instructor-prepared rating form

Competencies		Measures of Achievement	
DUTY AREA 4. Understanding Telecommunications Concepts			
4.1	Place outgoing telephone calls.	4.1	Student demonstration, rated acceptable on instructor-prepared rating form
4.2	Answer incoming telephone calls.	4.2	Student demonstration, rated acceptable on instructor-prepared rating form
4.3	Take telephone messages.	4.3	Role-play activity, rated acceptable on instructor-prepared rating form
4.4	Send and receive fax transmissions.	4.4	Student demonstration, rated acceptable on instructor-prepared rating form
4.5	Identify areas of telecommunications.	4.5	Instructor-prepared test, rated acceptable based on school system's standards
4.6	Transmit and receive information using e-mail and other Internet services.	4.6	Student demonstration, rated acceptable according to instructor's guidelines
DUTY AREA 5. Reinforcing Mathematics Skills			
5.1	Solve problems using a variety of calculating machine functions.	5.1	Instructor-prepared test, rated acceptable based on school system's standards
5.2	Compute interest.	5.2	Instructor-prepared test, rated acceptable based on school system's standards
5.3	Compute sales tax.	5.3	Instructor-prepared test, rated acceptable based on school system's standards
5.4	Compute commissions.	5.4	Instructor-prepared test, rated acceptable based on school system's standards
5.5	Compute discounts.	5.5	Instructor-prepared test, rated acceptable based on school system's standards
DUTY AREA 6. Enhancing Communication Skills			
6.1	Report on a business article.	6.1	Oral report, all items on an instructor-prepared checklist rated acceptable
6.2	Dictate and play back a business letter.	6.2	Student-produced tape, all items on an instructor-prepared checklist rated acceptable
6.3	Solve workplace problems.	6.3	Group analysis of case studies, rated acceptable according to instructor's guidelines
DUTY AREA 7. Conducting Receptionist Activities			
7.1	Make introductions.	7.1	Student demonstration, all items on an instructor-prepared checklist rated acceptable
7.2	Maintain an appointment calendar.	7.2	Student-completed calendar, all items on an instructor-prepared checklist rated acceptable

Competencies		Measures of Achievement	
7.3	Greet visitors.	7.3	Role-play activity, all items on an instructor-prepared checklist rated acceptable
	DUTY AREA 8. Managing Records		
8.1	Index, code, sort, and file personal and business names numerically.	8.1	Simulated activity, rated acceptable based on instructor-prepared guidelines
8.2	Index, code, sort, and file personal and business names chronologically.	8.2	Simulated activity, rated acceptable based on instructor-prepared guidelines
8.3	File names in business correspondence.	8.3	Filing simulation, rated acceptable based on instructor-prepared guidelines
	DUTY AREA 9. Preparing for Employment		
9.1	Identify the purposes and goals of the student organization.	9.1	Written or oral identification, rated acceptable according to instructor's guidelines
9.2	Participate in course activities sponsored by the student organization (e.g., meetings, programs, and other projects that require specialized skills and concepts).	9.2	Student demonstration, all items rated acceptable according to instructor's guidelines
9.3	Update resume.	9.3	Student-produced updated resume, completed with 100% accuracy
9.4	Demonstrate job interview skills.	9.4	Role-play activity, all items rated acceptable on an instructor-prepared checklist
9.5	Compose a letter of application.	9.5	Student-produced application letter, all items rated acceptable on an instructor-prepared checklist
9.6	Compose a follow-up letter.	9.6	Student-produced follow-up letter, all items rated acceptable on an instructor-prepared checklist
9.7	Answer frequently asked interview questions.	9.7	Role-play activity, student participation evaluated as acceptable on instructor-prepared and peer-completed rating form
9.8	Update portfolio containing representative examples of student work.	9.8	Student-produced business documents, all items rated acceptable based on instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 10

10.4 The student will read and interpret printed consumer materials.
- Identify essential information needed to operate specific tools, appliances, technology hardware, or other equipment.
- Analyze the information contained in warranties, contracts, job descriptions, and technical descriptions.
- Skim manuals or consumer texts to locate information.
- Compare and contrast product information contained in advertisements with instruction manuals and warranties.
- Apply the information contained in labels, warnings, manuals, directions, applications, and forms to complete simulated or real-world tasks.

10.7 The student will develop a variety of writings with an emphasis on exposition.
- Plan and organize ideas for writing.
- Elaborate ideas clearly through word choice and vivid description.
- Write clear, varied sentences.
- Organize ideas into a logical sequence.
- Revise writing for clarity and content of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.
- Use available technology.

10.9 The student will use writing to interpret, analyze, and evaluate ideas.
- Explain concepts contained in literature and other disciplines.
- Translate concepts into simpler or more easily understood terms.

10.10 The student will collect, evaluate, and organize information.
- Organize information from a variety of sources.
- Verify the accuracy and usefulness of information.
- Use available technology.

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.
- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.
- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

Office Specialist III 6742
(Targeted Populations)
CIP Code: 52.0408
Grades 11, 12 (36 weeks)
Prerequisite: None

Description: Students complete the Office Specialist sequence identified locally or progress in the sequence until prepared to transfer into other business courses. Students continue skill development and enhancement in the areas of keyboarding, word processing, office procedures, and records management.

Competencies	Measures of Achievement
DUTY AREA 1. Refining Word Processing Skills	
1.1 Process documents.	1.1 Student-produced document, rated acceptable based on instructor's guidelines
1.2 Create form letters using mail merge.	1.2 Student-produced form letter, all items on instructor's checklist rated acceptable
1.3 Create a two-page folded invitation.	1.3 Student-produced invitation, all items on instructor's checklist rated acceptable
1.4 Create a two-column newsletter.	1.4 Student-produced newsletter, rated acceptable based on instructor's guidelines
1.5 Format and key research-related documents.	1.5 Student-produced document, rated acceptable based on instructor's guidelines
1.6 Key and perform calculations on business forms.	1.6 Student-prepared business forms, keying and calculations rated acceptable according to school-system standards
DUTY AREA 2. Enhancing Communication Skills	
2.1 Compose a business letter.	2.1 Student-prepared business letter, rated acceptable based on industry standards
2.2 Transcribe business correspondence.	2.2 Student-produced mailable document, all items rated acceptable on instructor-prepared checklist
2.3 Transmit and receive information using e-mail, other Internet services, and fax.	2.3 Student demonstration, rated acceptable according to instructor's guidelines
2.4 Identify emerging trends in telecommunications.	2.4 Oral research report, all items on instructor-prepared rating form rated acceptable
2.5 Solve workplace problems.	2.5 Individual or group analysis of case studies, rated acceptable according to instructor's guidelines

Competencies	Measures of Achievement
DUTY AREA 3. Using Computer Software	
3.1 Use database management software.	3.1 Student-produced database, all items rated acceptable on instructor-prepared rating form
3.2 Use spreadsheet software.	3.2 Student-produced spreadsheet, all items rated acceptable on instructor-prepared rating form
3.3 Use records management software.	3.3 Student-produced screen or print record, all items rated acceptable on instructor-prepared rating form
3.4 Use desktop publishing software.	3.4 Student-produced document, all items rated acceptable on instructor-prepared rating form
DUTY AREA 4. Preparing for Employment	
4.1 Index, code, sort, and file by subject headings.	4.1 Instructor-prepared test, rated acceptable based on instructor-prepared guidelines
4.2 File names in business correspondence.	4.2 Filing simulation, rated acceptable based on instructor-prepared guidelines
4.3 Update resume.	4.3 Student-produced updated resume, all items rated acceptable on an instructor-prepared checklist
4.4 Refine job interview skills.	4.4 Role-play activity, all items rated acceptable on an instructor-prepared checklist
4.5 Update a letter of application.	4.5 Student-produced application letter, all items rated acceptable on an instructor-prepared checklist
4.6 Update a follow-up letter.	4.6 Student-produced follow-up letter, all items rated acceptable on an instructor-prepared checklist
4.7 Answer interview questions.	4.7 Role-play activity, student participation evaluated as acceptable on instructor-prepared rating form
4.8 Update portfolio containing representative examples of student work.	4.8 Student-produced business documents, all items rated acceptable based on instructor's guidelines
4.9 Apply for promotion.	4.9 Student-produced document, rated acceptable according to business standards
4.10 Identify the steps to follow in resigning from a position.	4.10 Written or oral report, rated acceptable according to instructor's guidelines

Related Academic Standards of Learning*

Instruction in the Business Program incorporates and reinforces Virginia Standards of Learning. Identified below are specific SOLs that are reinforced in this course. Local school divisions may wish to identify additional SOLs as reflected in instructional activities and cooperative efforts with other disciplines.

English

Grade 11

11.1 The student will make persuasive presentations.
- Organize evidence to support a position.
- Present evidence clearly and convincingly.
- Support and defend ideas and thoughts in public forums.

11.4 The student will read a variety of print material.
- Use information from texts to clarify or refine understanding of academic concepts.
- Read and follow directions to complete an application for college admission, a scholarship, or for employment.
- Read and follow directions to complete a laboratory experiment.
- Extend general and specialized vocabularies for reading and writing.
- Generalize ideas from selections to make predictions about other texts.

11.7 The student will write in a variety of forms with an emphasis on persuasion.
- Develop a focus for writing.
- Evaluate and cite applicable information.
- Organize ideas in a logical manner.
- Elaborate ideas clearly and accurately.
- Adapt content, vocabulary, voice, and tone to audience, purpose, and situation.
- Revise writing for accuracy and depth of information.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

11.8 The student will write, revise, and edit personal and business correspondence to a standard acceptable in the work place and higher education.
- Apply a variety of planning strategies to generate and organize ideas.
- Organize information to support the purpose of the writing.
- Present information in a logical manner.
- Revise writing for clarity.
- Use available technology.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

Grade 12

12.1 The student will make a 5-10 minute formal oral presentation.
- Choose the purpose of the presentation: to defend a position, to entertain an audience, or to explain information.
- Use a well-structured narrative or logical argument.
- Use details, illustrations, statistics, comparisons, and analogies to support purposes.
- Use visual aids or technology to support presentation.

12.4 The student will read a variety of print material.
- Identify information needed to conduct a laboratory experiment or product evaluation.
- Draw conclusions regarding the quality of a product based on analysis of the accompanying warranty and instruction manual.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

- Evaluate the quality of informational texts and technical manuals.
- Read and follow instructions to install a software program.

12.7 The student will develop expository and technical writings.

- Consider audience and purpose when planning for writing.
- Present ideas in a logical sequence.
- Elaborate ideas clearly and accurately.
- Revise writing for depth of information and technique of presentation.
- Edit final copies for correct use of language, spelling, punctuation, and capitalization.

Computer Mathematics

COM.4 The student will use operating system commands, which include creating a new file, opening an existing file, saving a file, making a printed copy (hard copy) of the file, and executing a program.

COM.23 The student will solve mathematical problems using formulas, equations, and functions. Problems will include those related to geometry, business, and leisure (e.g., sports and recreational activities).

Office Specialist IV 6743
(Targeted Populations)
CIP Code: 52.0408
Grade 12 (36 weeks)

Description: Students complete the Office Specialist sequence identified locally or progress in the sequence until prepared to transfer into other business courses. Students continue skill development and enhancement in the areas of keyboarding, word processing, office procedures, and records management.

If a fourth year is needed, the teacher should use simulated activities in the following areas:

1. Word processing
2. Spreadsheet
3. Database
4. Telecommunications
5. Desktop publishing
6. Records management

Related Academic Standards of Learning*

SOLs should be identified based on the curriculum developed locally.

*Academic SOLs are an essential component of vocational education and are required to be successful in an occupational field. The identification of related academic SOLs that are reinforced through application in vocational courses supports and enhances academic instruction.

Business Individualized Program (6745)
CIP Code 52.0408
Grade Levels: 9-12 (36 weeks)
Prerequisite: None

This course is designed by each local school division to serve students with special needs who desire and can benefit from business studies. The course is developed cooperatively between local business teachers and other specialized education personnel based on individual needs of the students. Course length is determined by students' needs and job requirements.

ALL ASPECTS OF THE INDUSTRY

One component of the work performed by the Business Technical Committee included the review and revision of tasks related to *All Aspects of the Industry* as referenced in the Carl D. Perkins Vocational and Applied Technology Education Act of 1990. The committee identified tasks related specifically to business occupational areas that they felt entry-level workers should know. The tasks are grouped in the eight organizational categories designated in the legislation.

All Aspects of the Industry includes, with respect to a particular industry that a student is preparing to enter, the following areas: planning, management, finance, technical and production skills, principles of technology, labor, community, health, safety, and environmental issues related to that industry.

The Virginia Office of Vocational, Adult, and Employment Training Services, proposes that each course within a program may or may not reflect *All Aspects of the Industry*. The key requirement is that the program reflect the eight components found in the federal definition of *All Aspects of the Industry*.

Following is a suggested list of the industry competencies. Because school divisions will have a variety of course mixes for determining technical concentrations, each school division should identify all eight components of *All Aspects of the Industry* for their Business program.

Note: *The following competencies should be reviewed and incorporated in locally identified sequences for program completion.*

PLANNING

Aspect 1. Identify key elements of planning that an employee should know to succeed in business.

1.1 Describe the planning process, to include mission, goals, and objectives.
1.2 Define internal and external customers, and explain the advantages of responding to their wants and expectations.
1.3 Distinguish between planning needs of companies delivering products and of those delivering services.
1.4 Identify various tools for planning (e.g., surveys, market research, competitive analysis).
1.5 Describe ways companies use input from employees to make decisions.
1.6 Anticipate technology and other major purchasing needs.
1.7 Give examples of the effects of regulatory laws on business operation.
1.8 Cite examples of how political or labor organization groups can influence company operation.
1.9 Forecast market trends.

MANAGEMENT

Aspect 2. Identify key elements of management that an employee should know to succeed in business.

2.1 Identify purpose(s) and key components of a company vision and mission statement.
2.2 Use an organization chart to explain how a corporate chain of command works.

2.3 Identify various approaches to management and supervision.
2.4 Describe the significance of a company's corporate culture and climate.
2.5 Explain the advantages and disadvantages of various business ownerships.
2.6 Explain the interrelationship between a company and the local/state/national economy.
2.7 Explain the effects of cultural diversity on business.
2.8 Explain the functions of written policies and procedures.
2.9 Explain the roles of professional organizations.
2.10 Identify ways a company's image affects all of its employees.
2.11 Identify recruitment procedures, training opportunities, evaluation methods, and retention strategies found in the workplace.

FINANCE

Aspect 3. Identify key elements of finance that an employee should know to succeed in business.

3.1 Examine sources of business capital.
3.2 Explain why businesses keep financial records.
3.3 Describe the advantages and disadvantages of granting credit to customers.
3.4 Identify common payroll deductions.
3.5 Identify methods of sustaining profitability of a business.
3.6 Explain how taxes affect a business.
3.7 Examine the impact of cash flow on an organization.

TECHNICAL AND PRODUCTION SKILLS

Aspect 4. Identify technical and production skills that an employee should have to succeed in business.

4.1 Use negotiation and conflict resolution skills.
4.2 Use time management techniques.
4.3 Demonstrate basic computer operations.
4.4 Describe the importance of project management.
4.5 Participate in team efforts.
4.6 Use troubleshooting and problem-solving techniques.
4.7 Acquire and analyze information to make decisions.
4.8 Identify methods of quality assurance.
4.9 Employ communication skills (e.g., writing, listening, speaking, reading).

PRINCIPLES OF TECHNOLOGY

Aspect 5. Identify principles of technology that an employee should know to succeed in business.

5.1 Describe the major uses of technology in business.
5.2 Analyze new equipment for possible purchase and for its potential impact on the organization.
5.3 Describe the importance of continuously upgrading one's job skills.
5.4 Describe the importance of cross-training.

LABOR

Aspect 6. Identify labor issues that an employee should know to succeed in business.

6.1 Describe the uses of a written job description.
6.2 Identify local, state, and federal legislation affecting employee and employer rights.
6.3 Identify pay and benefit advantages and disadvantages of hourly and salaried (exempt/non-exempt) employees.
6.4 Explain the differences between being self-employed and being employed by a company.
6.5 Describe the advantages of participating in career enhancement programs.
6.6 Identify certification requirements for a specific job.
6.7 Identify the impact of a labor agreement on a business operation.
6.8 Explain the impact of indirect wage costs (benefits, FICA, insurance, worker's compensation, etc.) in operation.

COMMUNITY

Aspect 7. Identify concepts of business/community relations that an employee should know to succeed in business.

7.1 Describe the implications of being a good corporate citizen.
7.2 Identify ways companies and communities can help each other.
7.3 Identify potential effects of a company's public perception.
7.4 Describe how an individual employee is a reflection on a company's image.

HEALTH, SAFETY, AND ENVIRONMENT

Aspect 8. Identify concepts of health, safety, and environment that an employee should know to succeed in business.

8.1 Identify major federal, state, and local regulations related to the health and safety of business employees.
8.2 Identify major federal, state, and local environmental regulations related to business.
8.3 Identify job-specific health hazards.
8.4 Identify basic safety and first aid training techniques for emergencies such as personal illness or injury, tornadoes, fires, nuclear accidents, and floods.
8.5 Identify signs and sources of stress and ways of handling it.
8.6 Identify examples of ways ergonomics has been incorporated into the workplace.
8.7 Describe steps that employees can take in maintaining a safe workplace.

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